SECTION II

INVENTORY AND ANALYSIS

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2.1 OBJECTIVES AND GOALS

A. Overall Purpose of the Local Waterfront Revitalization Program

The intent of the New York State Legislature in enacting the Coastal Management Program, of which the Local Waterfront Revitalization Program is part, can best be summed up in one of the Legislative Findings and in one element of the Declaration of Policy set forth in New York Executive Law, Article 42. Both are listed first in the respective sections. They are as follows:

> The legislature hereby finds that New York State's coastal area and inland waterways are unique with a variety of natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources of statewide and national significance.
>
> It is hereby declared to be public policy of the State of New York within the coastal area and inland waterways:
>
> To achieve a balance between economic development and preservation that will permit the beneficial use of coastal and inland waterway resources while preventing: the loss of living marine resources and wildlife; diminution of open space areas or public access to the waterfront; shoreline erosion; impairment of scenic beauty; and permanent adverse changes to ecological systems.

The Department of State has been directed to pursue this policy through local government initiatives in the form of Local Waterfront Revitalization Programs (LWRP), such as this one for the Village of Sag Harbor. The LWRP identifies problems and opportunities, establishes local policies responsive to the community's needs and compatible with the broad State policies, develops a generalized land and water use plan, and provides a program for management, regulation and project implementation of that plan.

The Village of Sag Harbor is proud of its long history and the many historic buildings that grace its streets. It has retained a small-scale country Village and seaport character that is unique. As the following initial objectives indicate it seeks to enhance this character rather than exploit it by maintaining a balance between economic development and the preservation of its environment. Those initial objectives were:

1. To provide high quality, safe recreational facilities to all local residents based upon their needs and capacities.
2. To provide recreational opportunities within easy walking and bicycling distance of all Sag Harbor residents, including the young and elderly.
3. To complement existing privately operated boating facilities and historic attractions in Sag Harbor.
4. To improve the local economy.

5. To preserve significant open space resources in a rapidly developing area for uses compatible with the characteristics of the land.
6. To strengthen the economic base of a small harbor area by encouraging the development and enhancement of traditional uses and activities.
7. To manage the waterfront area.
8. To preserve public recreational facilities along a shoreline that is severely restricted by existing development.

Although these objectives have been modified to some extent, they still represent the basic intent of the Village of Sag Harbor.

B. LWRP Amendment

The original Local Waterfront Revitalization Program (LWRP) was adopted in 1986. Since then, certain things have changed in the Village of Sag Harbor to warrant the updating of that LWRP. The LWRP has had a positive effect on the Village in the sense that it has helped to improve the waterfront area and provide additional public amenities. The local boating and tourist industry have benefitted from the changes that have occurred. The LWRP also established pertinent laws and regulations for the control of shore front and surface water activities. This amendment to the 1986 LWRP document is aimed at continuing these efforts and expanding upon some of the programs and controls that were initially established to more effectively improve and protect waterfront resources and facilities.

The objectives of this LWRP amendment are as follows:

- To expand the coastal area boundary to encompass the entire Village, in order to comprehensively plan for wise use and development;
- To safeguard the tranquil residential and historic atmosphere of Sag Harbor Village;
- To protect and restore the natural resources of Sag Harbor and ensure that neither commercial nor residential interests impact these resources;
- To provide recreational opportunities for residents and visitors appropriate to the historic atmosphere and natural ecology of the Village;
- To develop opportunities for residents and visitors to enjoy and learn about the history and natural environment of the Village;
- To survey the commercial, residential and ecological needs of the Village in order to develop a plan that will balance those needs; and
- To identify projects that will implement these objectives.

This document serves as an amendment to the Sag Harbor LWRP and examines a number of conditions that are considered to be important in light of the types of activities that occur in Sag Harbor today. It also includes a Harbor Management Plan component that exclusively examines nearshore and waterside conditions and issues more thoroughly. Of particular importance is the fact that jurisdiction over the lands and waters of Sag Harbor is divided among a number of political entities at various levels of government. These include the Town of Southampton, the Town of East Hampton, the Incorporated Village of North Haven, Suffolk County, the State of New York and certain federal agencies. This multiplicity of regulatory jurisdictions requires the cooperation of many of these involved entities in order to control or resolve certain problems or achieve certain management goals, i.e., the improvement of water quality. Most of the underwater lands beneath Village waters are owned by the Town of Southampton and the State of New York. The regulation of actions that occur on these lands is outside the authority of the Village.

Since the LWRP was first adopted, the need to strengthen existing laws and enact additional legislation has arisen. Although the original LWRP designated water use districts, no regulatory standards were adopted to manage uses and activities occurring in those districts. The importance of tidal and freshwater wetland resources has also become a significant issue, highlighting the need for either the amendment of existing Village law, or the adoption of a separate law, to strengthen the protection of those resources.

2.2 ORIENTATION

A. Location and History

Sag Harbor is an incorporated Village, located about 95 miles from midtown Manhattan on the north shore of the south fork of Long Island, adjacent to Sag Harbor Bay (see Figure 1). It has the character of a country village and seaport. With roughly 3.3 miles of shoreline and a total area of approximately two square miles, Sag Harbor Village is bisected by the Southampton-East Hampton Town Boundary line. Like many seaports, Sag Harbor's road system radiates from the focal point at the Long Wharf. The principal access roads are the Easthampton-Sag Harbor Turnpike, New York State Route 114 (which continues north from Sag Harbor across a bridge to provide one of two access roads to the Village of North Haven), and the Bridgehampton-Sag Harbor Turnpike (County Route 79).

The Village has a long history preserved in its notably rich and varied architecture. High points include its service as a revolutionary port and garrison, its development as a prosperous whaling port in the first half of the 19th century and its subsequent decline and rebirth as a business and manufacturing center.

> "There are no definite records of any permanent [European] settlement in Sag Harbor before 1730. Southampton was first settled in 1641 and East Hampton in 1649. All were settled by English colonists from Connecticut." Until 1664, Long Island's east end settlements

aligned themselves politically with Connecticut, thus strengthening English colonial influence. After 1664 they were politically joined to New York. Nevertheless, English customs continued to predominate over Dutch customs.[1]

"The first impetus to the growth of the Village occurred in the mid-18th century when the Sagaponack and Mecox settlements in the eastern part of Southampton Town had grown to a degree where a more convenient outlet was needed for the export of a growing agricultural surplus and the importation of needed goods and raw materials. The well-protected and commodious 'harbor of Sag' was the natural site for such a port. Between 1760 and 1770, a trade had been opened up between Sag Harbor and the West Indies, and by the end of the century, the little port had a greater tonnage of square-rigged vessels than the port of New York. The first indication of an interest in whaling was in 1761 when the Town of Southampton authorized the construction of a wharf and tug-house at the Harbor."[2]

The major epochs in the history of Sag Harbor have been heralded by war and fire. The Fire of 1877 was the third major conflagration. However, it also marked the end of a 25-year period of decline from the whaling period. As the whaling industry declined in the 1850s, various other waterfront industries replaced this activity, including shipping; steam powered passenger travel; flour and grain milling; concrete block, brick and pottery works; and shipyards, among others. The Village's rebirth in the late 19th Century was as a business and manufacturing center. It also grew as a summer resort.

Although the shore front has changed since then, and the whaling industry has long been abandoned, many of the existing waterfront uses have established their foundation in this past. The protection offered by the harbor, which made it an attractive location for whaling, shipping and trade in the 19th century, supports extensive boating and other marine-related activities today. The Harbor District and the Outer Sag Harbor Cove areas both contain full service boat yards. The waterfront also supports an excursion service from Connecticut and charter boat services, as well as a moderate shellfishing industry.

Today this history and the waterfront make Sag Harbor an ideal summer resort and commercial center on Long Island's South Fork. As manufacturing activity has declined the summer resort industry and general business has become the main economic resources. Retail trade and construction are the second largest.

Many retired individuals were once drawn to the Village because of the availability of high quality homes at low cost. This condition is changing as Sag Harbor homes increase in cost. However, the aesthetic character of the Village continues to attract new residents. Today the three predominant

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[1] SAG HARBOR: Past, Present, and Future. Prepared by Robert H. Pine, A.I.P., 1975. p.1 and 2

[2] Ibid, p.44.

residential groups are: (1) locally employed/professionals, (2) retired individuals, and (3) second home residents and transient visitors.

Sag Harbor's vitality is based on the quality of its historic environment as a setting for both principal and second homes, and for summer resort and tourism activities all supported by a fine harbor suitable for large recreational boats, an attractive business center and necessary public services.

B. Population Growth and Characteristics

From 1960 through 1990, the U.S. Census showed a very slow increase and then a decline in resident population as of April 1st in the Census years. This count includes only those persons who lived in Sag Harbor as regular year-round residents. Second home residents would not customarily be included. The data are as follows:

	East Hampton (T)*	Southampton (T)*	Sag Harbor (V)
CENSUS YEAR			
1960	874	1,472	2,346
1970	835	1,528	2,363
1980	895	1,686	2,581
1990	858	1,276	2,134

[* indicates portion]

Analysis of the U.S. Census of Population and Housing statistics for 1970 and 1990 reveal several additional Village characteristics of interest. As the Village matured over these twenty years the number of school children (age five through 14) declined dramatically from 424 to 250. This trend has reversed and the number of school children is now on the rise. Sag Harbor has continued to attract relatively young adult residents. The number in the 25 to 44 year old age group has increased for the greatest percentage gain of any of the Village's age groups. In 1990, this sector of the population represented 30 percent (619 persons) of the total Village population. The only other age group to come close to this is the 65 and over sector, which totaled 505 persons (or 23.5 percent) in 1990. The median age in 1990 was 43.7 years old.

Household characteristics indicate a change in family lifestyle that began during the 1970s and has continued through the 1990s, although the numbers have declined due to the overall population decrease from 1980 to 1990. Non- family households, those of single individuals or in some few cases households of unrelated individuals, represented 42.3 percent of the total number of 983 households. Single-headed family households made up only 8 percent of the total number of households, which is a decrease since 1980. Married households represented almost half of the total number of households (49.2 percent or 487 households) indicating that the trend toward non-

traditional households has not significantly changed (in 1980, this sector of the population represented only 50 percent of the total number of households).

The impact of these demographic changes is evident in the housing inventory data from the U.S. Census of Housing for 1970 and 1980. The number of occupied year-round housing units in all types of structures increased from 869 to 1,117 -- 29 percent as compared with the 9 percent population increase during this same time period. However, tenancy changed from 22 percent renter occupied in 1970 to 31 percent in 1980, and owner-occupied housing units decreased from 78 to 69 percent. Both types of tenancy had increases in their number of occupied housing units. Structures with two or more housing units in them accommodated 59 more housing units by 1980 - for a 27 percent increase.

In 1990, the population density - expressed as the number of persons per household - was considerably different in the East Hampton and Southampton sectors of the Village. They were 2.23 and 2.13 persons per household, respectively. Village-wide it was 2.18 persons per household.

2.3 INVENTORY OF EXISTING LAND USES, WATER USES AND ZONING

A. Existing Land and Water Uses and Zoning

(a) Land Use

The Village of Sag Harbor is a historic community and, as a result, a mature one with a well-defined pattern of land use. The Village also possesses extensive shoreline that fronts on a number of surface water bodies, including: Upper Sag Harbor Cove, Morris Cove, Ligonee Brook, Inner Sag Harbor Cove, Outer Sag Harbor Cove, Sag Harbor (the area between the breakwater that protects the navigation channels, marinas and anchorage area), and Sag Harbor Bay. Its boundaries on the east and west are defined by Little Northwest Creek and Ligonee Brook, respectively. With these environmental resources, the Village is rich in open spaces and recreational facilities on both land and water.

The recommended revised Local Waterfront Revitalization Program boundary encompasses the Village's entire land area. The extraterritorial jurisdiction on the adjacent water bodies includes all of Upper Sag Harbor Cove, Morris Cove and significant portions of the remaining water bodies based on the 1,500-foot dimension or, in the case of the smaller water bodies, one half the distance between the opposite shores.

As in most small country Villages with a seaport, business activity is focused on Main Street which extends inland from the water's edge at Long Wharf, the principal public dock. Much of the street system radiates from the Long Wharf. Although some scattered businesses are located outside the Village's Central Business District (CBD), the land area beyond the Village CBD is generally residential in character. The majority of the historic buildings and landmarks are clustered around the Village business center. With the exception of public

buildings and other commercial structures in the CBD, the architectural character of development in the Village has maintained a human scale, with buildings generally no more than 2½ stories high.

Existing land and surface water uses in the Village of Sag Harbor are shown on Figure 2. Land use categories shown on this map are comparable to those shown graphically on the Existing Land Use - 1983 Map, and on the Existing Land Use Map - 1977 of the Long Island Element of the Coastal Management Program.

Overall, much residential land subdivision and development has occurred in the Village. Within the LWRP area most of this has been at a medium density (2-4 units per acre) with some high density (5+ units per acre) at scattered locations. The latter density includes older residences on small lots as well as the Villas at Sag Harbor on West Water Street and the Harbor Close at Long Island Avenue and Bridge Street. The proposed adaptive reuse of the Bulova Watchcase factory building is high-density residential condominium development. Although there are vacant residential lots within the LWRP area, in several instances these are left over pockets of wetlands not well suited for development. There are only two relatively large vacant sites and one former agricultural property that might offer significant subdivision opportunities. One vacant site lies along the projected alignment of Hillside Drive East near the east end of the Village. The other is immediately west of the Baron's Cove Inn, between West Water Street and Long Island Avenue. The agricultural property (locally known as the *Cilli Farm property*) is immediately west of the second site and extends out to a frontage on Glover Street.

For the purposes of this land use discussion, the LWRP Area can be divided into the following *functional areas* (see Figure 3):

1. Western Residential;
2. Central Residential;
3. Eastern Residential;
4. Waterfront;
5. Village Central Business District (CBD); and
6. Resort Motel.

1. Western Residential Functional Area

The *western residential functional area* encompasses the western portion of the Village, west of Main Street and Bayview Avenue, and front along the Sag Harbor Cove Complex. This area is developed primarily with low and medium density residential uses. At present, the north side of Redwood Avenue, at the Redwood Canal, is developed with the Ship Ashore marina and boatyard, which is designated as a *waterfront functional area*. The area on the south side of Redwood Avenue, just east of the marina, is used by a radio station, and is included in this functional area. The radio station is the only significant commercial use in

this functional area, aside from a gas station located on the corner of Main Street and Brickiln Road. This functional area also includes a large fire department property, located on the north side of Brickiln Road, that contains the fire station and other related facilities.

The entire *western residential functional area* is zoned R-20-One-Family Residence, with the exception of a large condominium complex located along the shoreline (see Figure 3). This area is zoned MF Multi-Family Residence. These zoning classifications are discussed in greater detail in Section 2.3A(c).

The *western residential functional area* contains two areas of wetlands that drain to Upper Sag Harbor Cove. One area surrounds the outlet creek from Otter Pond, the other area is surrounds a large pond on John Street.

This area contains a large condominium complex which is situated along the shore of Outer Sag Harbor Cove, just west of the Sag Harbor Cove West Marina. There is also a significant area of undeveloped open space and a large agricultural property that present potential opportunities for future development in this area. Both of these sites are zoned for residential use and any future development at these locations should be reviewed for compatibility with surrounding uses and to prevent impacts to natural resources. This entire area was once a dredge spoil disposal site and the plants growing on the agricultural land are indicative of brackish wetlands.

2. <u>Central Residential Functional Area</u>

The *central residential functional area* is located in the center of the Village, between Long Island Avenue/Bayview Avenue/Mains Street and Rysam Street/Division Street. This area extends south from the boundary of the CBD to the Village border. The central residential area primarily contains single-family residential development as well as Otter Pond and Mashashimuet Park, a large cemetery, and some limited areas of wetlands and undeveloped open space. This entire functional area is zoned R-20 Residence (Figure 3), which is discussed in greater detail in Section 2.3A(c).

Sag Harbor was a whaling community which flourished during the first half of the 19th century. The historically significant Sag Harbor *central residential functional area* contains a large number of 18th and 19th century structures remarkably uninterrupted by 2Oth century intrusions. Maritime and cultural links with New England associate this area of the Village visually with ports of that region rather than with other communities of New York. Formerly a U.S. Port of Entry and a center of maritime trade and commerce, the Village is extraordinary for the quantity of structures present from the 18th and first half of the 19th century, as well as for the quality of individual buildings.

The area between Division Street and Rysam Street still retains much of the environmental feeling of a small seaport village residential area, has particular charm. Perhaps because of

its age, it also has need of improvements, both public and private. Finally, this area along with the Bulova Watchcase Factory building and the rear yards of buildings fronting on Main Street, constitute another "front-yard-gateway" into the Village business center/waterfront.

The Harbor Close Condominiums on Garden Street, and the prospective adaptive reuse of the Bulova Watchcase Factory building for residential condominiums represent a new style of residential use that is a step away from the traditional one-family dwelling unit that typifies the majority of this area.

The Village of Sag Harbor and the Society for the Preservation of Long Island Antiquities (SPLIA) own contiguous properties in the *central residential functional area* that comprise most of a natural marsh area. This wetland is located between Garden and Spring Streets, at the rear of the Old Custom House property. This wetland has become overgrown with *Phragmites* which is affecting it drainage capabilities.

South of Jermain Avenue, the *central residential functional area* becomes more rural in nature, containing more open space and limited residential development. Much of this area is comprised of Mashashimuet Park (discussed below), and the Oakland Cemetery property. Only limited land area is available for additional residential development.

Mashashimuet Park is a large park encompassing approximately 84.6 acres. Mashashimuet Park is owned and managed by the Russell Sage Foundation and serves as a public park and playground. Mashashimuet Park includes two separate open space areas (six acres which surround Fore and Aft Pond and 2.6 acres that comprise the Maple Swamp wetlands that drain to Otter Pond). The park area also contains a wide variety of recreational amenities.

Otter Pond Park is an 11.3-acre property bounded by Main Street on the west and Jermain Avenue on the south. Otter Pond Park is also owned and managed by the Sage Foundation. A nature walk with benches partially encircles the park and provide users with access for passive recreation and fishing. Otter Pond is hydraulically connected to Upper Sag Harbor Cove via a culvert through the west bank of the Pond.

3. Eastern Residential Functional Area

The *eastern residential functional area* encompasses the eastern portion of the Village, generally east of Division Street. This area contains low to medium residential development, a large public park and beach, two public schools, a NYSDEC conservation area, a 12.5-acre Suffolk County Water Authority property, the Cor Maria Roman Catholic retreat, and intermittent areas of undeveloped open space.

The R-20-One-Family Residence zoning classification covers the entire *eastern residential functional area* (Figure 3). This zoning classification is discussed in further detail in Section 2.3A(c).

Haven's Beach, located just east of the business center and commercial waterfront, is an 18.8-acre facility offering swimming and picnicking opportunities. Haven's Beach is a Village-owned facility which has been designated as a municipal beach, pursuant to Article 1 of Chapter 27 (Land and Beach Use) of the Village Code. However, a good portion of this site is underutilized and the potential for improvement exists that would enable the Village to enhance user enjoyment. In addition, certain essential improvements are required to upgrade present use and enjoyment, in particular the provision of sanitary services. Daily tourist population is estimated at 300 persons during a peak summer weekend, with parking an auto capacity for 60 vehicles. Currently, bathers are discouraged from using the beach and instead utilize Long Beach in Southampton Town.

There is also evidence that the drainage ditch that bisects this park is contaminated with roadway runoff and septic leachate. This ditch carries stormwater runoff collected along Bay Street and Hempstead Street. It is also suspected that the runoff flowing through the Haven's Beach drainage ditch is contaminated with a number of nonpoint source pollutants. Remediation is required to address this problem and improve the quality of the stormwater runoff reaching Sag Harbor Bay.

The *eastern residential functional area* contains three small, homeowners' association beaches that are situated on Sag Harbor Bay (see Section 2.3A(f)2). Each beach facility is comprised mainly of a undeveloped vacant waterfront lot which provides waterfront access and limited parking. Each beach property is protected from future development through restrictions contained in each homeowner's deed. Although utilization of each beach is restricted to members of the associations, these facilities provide recreational access that would otherwise be blocked by private residential development. It should be noted that the seaward boundaries of the individual association properties are tied to the mean high water line.

Cor Maria, a 16.7-acre Roman Catholic Church retreat, lies between Haven's Beach and the *waterfront functional area*. It has more than 1,600 linear feet of shoreline on both the active harbor and Sag Harbor Bay. The breakwater structure that protects the harbor area extends from the shoreline of the Cor Maria property. Although no change is anticipated in the use of this property, if it should become available for reuse, it would have a significant impact on the entire Village and its character. This property is zoned for residential use and could accommodate an estimated 30+ dwelling units. Preservation of the shoreline for public access and the character and intensity of the new use would be principal concerns with reference to their impact on the natural environment and on the character and quality of the entire Village.

The area further east along the shore of Sag Harbor Bay, and inland to the Village boundary is substantially developed with low and medium density residential uses and much of the attractive native woodland vegetation remains. Residential owners should be encouraged to

preserve this character wherever possible. This area also contains a few large areas of undeveloped open space that are privately owned and zoned for residential development.

The NYSDEC owns approximately 190 acres of wetland and undeveloped open space along both sides of Little Northwest Creek. Approximately 50 acres of this conservation area, which contains both tidal and freshwater wetlands, are located within Village boundaries. The estuarine wetlands along Little Northwest Creek are one of the most significant natural habitats in this area. Aesthetically, it also serves another purpose - as an open space it provides a fine break in the pattern of development which defines the Village of Sag Harbor boundary.

Suffolk County Water Authority owns a 12.5-acre parcel located along the southeastern Village boundary. Although the property contains a water tank, a small building, and long roadway which provides access from Madison Street, it is primarily comprised of undeveloped open space. The property is zoned for residential use.

Problems in the *eastern residential functional area* include shoreline erosion, stormwater runoff into Sag Harbor Bay and Little Northwest Creek, the potential impact of future development upon the few remaining large properties, and the potential impact of recreational activities on the marine environment.

4. Waterfront Functional Area

The *waterfront functional area* extends from the Sag Harbor Cove West Marina, on West Water Street, to the western side of the Cor Maria property on Bay Street. The waterfront area also includes the Ship Ashore Marina located at the Redwood Canal. With the exception of the area located between Rysam Street and Dering Road, the *waterfront functional area* does not extend south of West Water Street and Bay Street. There is also one area where the retail uses from the Village business center (CBD) extend north across Bay Street and onto the Long Wharf, reducing the width of the waterfront area. Despite the fact that these uses are not water-dependent, they serve to provide an activity connection between the waterfront and the Village business center. The *waterfront functional area* located along West Water Street and Bay Street is zoned WF Waterfront. The *waterfront functional area* located on the Redwood peninsula is zoned MA Marine. These zoning classifications are discussed in Section 2.3A(c) of this document.

Land uses in the *waterfront functional area* include the following (from west to east):

- *Ship Ashore Marina*

Ship Ashore Marina is a private marina and boatyard located at the eastern end of the Redwood peninsula, in the western portion of the LWRP area. Ship Ashore Marina is located within the Redwood canal, which is also referred to as the Redwood boat basin, and

has direct access to Outer Sag Harbor Cove. Ship Ashore Marina provides a full range of boat repairs and services, and can accommodate any commercial vessel that can access this facility. This marina contains 101 slips with electric service, and can accommodate power boats up to 35 feet in length. A boat launch ramp, shore side dock, and on-site boat storage are also provided. The Ship Ashore facility is open year-round for boat repair services, and is served by a 30-ton lift. This marina does not offer a vessel waste pump-out facility. In addition, marine supplies are available at this site. Parking is provided on this site for approximately 100 vehicles. During the off-season, boats are stored in portions of the parking area.

- *Sag Harbor Cove West Marina*

Sag Harbor Cove West Marina is a private facility located on West Water Street, west of the North Haven/State Route 114 bridge, at the eastern end of Outer Sag Harbor Cove. This marina has 84 slips (30 of which are for transient vessels), and offers seasonal dockage for power boats up to 50 feet in length. Electric service and a fueling dock (gasoline only) are also provided. Parking is provided on-site for about fifteen cars. A public parking area adjoins this facility. Additionally, the Sag Harbor Cove West Marina facility offers associated motel and restaurant services, laundry, and showers on the south side of West Water Street (outside the waterfront district). A vessel waste pump-out facility, however, is not available at this marina.

- *Village A and B Docks*

The Village of Sag Harbor operates two docks in eastern Sag Harbor Cove known as the **A** and **B** docks. These docks are located on West Water Street, in the cove area between Sag Harbor Cove West Marina and Sag Harbor Cove East Marina (discussed below). The A dock, which is located adjacent to Sag Harbor Cove East Marina, is a fixed structure that provides 22 slips for vessels up to 30 feet in length. The B dock, which is located near the Sag Harbor Cove West Marina, is a floating structure that provides 50 slips for vessels up to 30 feet in length. Both docks offer electric and water services and provide seasonal dockage (from April 1 to October 31), with annual leasing fees that vary based on residency status. The B dock is generally utilized for in-water winter storage (seasonally from November 1 to March 31). In addition to the dockage available at the A and B dock facilities, the Village provides 48 seasonal cable slips along the shoreline between the two docks.

Off-street parking is provided in the vicinity of these docks. There are 14 parking spaces located along the north side of West Water Street, adjacent to the cable slips. There are also two small parking areas located adjacent to the A and B docks. The parking area near the A dock can hold nine cars; the area near the B dock can accommodate ten. In addition, there are 14 parking spaces available in a small lot located across from the A dock and 16 spaces situated along the south side of West Water Street, adjacent to the Sag Harbor Inn.

- *Sag Harbor Cove East Marina*

Sag Harbor Cove East Marina is a private facility located on West Water Street, east of Sag Harbor Cove West Marina and west of the North Haven/State Route 114 bridge. This marina provides 80 slips (25 of which are for transient vessels) on a seasonal basis with electric service, and offers dockage for power boats up to 85 feet in length. Ice and groceries, laundry, and showers are available. A restaurant and snack bar are also situated on-site. No boat repair services or fueling dock are available at this facility.

There is a small triangular-shaped Village-owned property located just south of Sag Harbor Cove East Marina. This area offers limited public parking and public greenspace.

- *Windmill Park*

Windmill Park is a Village-owned, 1.9-acre strip of shore front located along both sides of the North Haven/State Route 114 bridge abutment. The eastern portion of the park is situated at the terminus of Main Street and acts as a focal point for tourist activity. This side of the park contains a small beach area, a tourist information center (contained in an historic windmill structure), a few benches for public viewing and a single picnic table. This windmill facility is operated by the Sag Harbor Village Chamber of Commerce as an

information center during the summer season. The western side of the bridge is undeveloped public space.

- *The Long Wharf*

The Long Wharf structure is owned by Suffolk County, but all dockage activities are managed by the Village of Sag Harbor. Docking occurs along the entire face of the Wharf, with the exception of the area set aside for the finger docks and floating dock which comprise the Long Wharf Marina (discussed below). The number of vessels that can tie up at any single time depends on vessel lengths. Typically, only larger vessels (to a maximum length of greater than 100 feet) utilize the Long Wharf on a regular basis. Smaller boats wishing to dock in this area utilize the finger piers or the small Village mooring area (which located west of the Long Wharf).

New England Steamship Lines runs a seasonal (summer) passenger excursion ferry service from Haddam, Connecticut that docks at the northern end of the Long Wharf. The "Yankee Clipper" (which has a capacity of 500 persons) departs Haddam each morning, to dock at the Long Wharf by noon. This ship returns to its home port three hours later. This dockage arrangement is governed by a long-term lease with the Village, for which the ferry company pays an annual fee that increases from year to year.

Other large seasonally-operated vessels utilize the western side of the Long Wharf for docking (see discussion of Village docking facility below), including large sail boats that come from Mystic, Connecticut and stay overnight. The American Beauty provides an established charter service which is operated by Harbor Tours, Inc. This 45-foot vessel can accommodate a maximum of 38 passengers. This charter service offers sightseeing cruises and other private charters in the Peconic/Gardiners Bay system.

The Long Wharf is also utilized by pedestrians for passive recreational purposes. It contains a number of benches along the perimeter which provide visual access to adjacent waters. The Long Wharf also provides public parking area for approximately 100 vehicles. The wharf also adjoins a small privately-operated fish market and a complex of retail shops at the south end, near Main Street.

- *Village Finger Docks (Long Wharf Marina)*

The Village provides seasonal dockage on the west side of the Long Wharf, known as the Long Wharf Marina. This floating dock contains nine finger piers for small vessels on its western side; in addition, vessels (including charter boats) can tie up along the eastern side, between the main floating dock and the Long Wharf. Electric and water services are provided for the nine slips. These slips are utilized on both a seasonal and transient basis. During the winter season, the finger piers are stored adjacent to the **A** dock.

- *Waterfront Marina*

Waterfront Marina is a private facility located north of Bay Street, on the east side of the Long Wharf. Waterfront Marina provides seasonal dockage for 67 permanent and transient vessels; there is no vessel waste pump-out facility and no boat repair services available on this site. Both power and sail boats, up to a maximum length of 150 feet, can be accommodated at this facility. Services include dockside electricity, ice, and showers. A restaurant is also located on-site, upland from the marina. This site also includes a fish market which is leased for private operation.

- *Marine Park and Boat Basin*

Marine Park is a Village-owned and operated facility situated on Bay Street, to the immediate east of Waterfront Marina. Seasonal and transient dockage is provided at this facility. A total of 32 vessels (maximum length 40 feet) can be docked along the main bulkhead, 16 of the slips are for transient usage. An additional 15 vessels can be docked on a seasonal basis in the boat basin, 11 at boat slips and four on cable slips.

Dockside electricity and showers are available at the Marine Park site; fees for these services are charged on an annual and transient basis. In addition, the Village maintains a dinghy dock which supplies eighty slips that provide access to the Village mooring field (discussed below). The dinghy dock is located at the eastern end of Marine Park, and extends off the bulkhead which is situated in front of the Village sewage treatment plant. This dock is installed every year, at the beginning of April.

A boat launching ramp, which can accommodate one trailer at a time, is present in the boat basin. Use of this ramp is free to Village residents but nonresidents are charged a nominal fee. Seasonally (from June 1 through August 31) about 400 boats are launched at this ramp. There are two floating docks located directly west of the boat ramp. These are owned and operated by the Bayview Bait and Tackle Shop, which is located across the street from this site, on the corner of Bay and Rysam Streets. Seasonal and daily permits for ramp usage are issued through the dock master's office.

Parking for the Marine Park facility is provided on-site. In addition, approximately 25 off-street parking spaces are located along the north side of Bay Street, adjacent to Marine Park. Another 14 spaces are located along the south side of the boat basin. The Village provides additional parking in a municipal lot located directly south of the Sag Harbor Yacht Club docks (discussed below), on the east side of the boat basin. This lot can accommodate over 40 vehicles. The Village has extended this parking lot eastward onto the former Mobil Oil property. The Village acquired this land in October of 1994. There are also over 50 parking spaces located along the south side of Bay Street, across from the Marine Park and yacht club facilities.

- *Village Mooring Areas*

The Village of Sag Harbor operates a large mooring area which is located between the navigation channel and the breakwater. There is another, smaller, mooring area situated on the western side of the Long Wharf (discussed above). Combined, these areas can accommodate up to 150 vessels, although the number varies depending on vessel size. There are generally 130 usable moorings locations at all times. Shoaling in the vicinity of the breakwater and near the Long Wharf limits the use of these areas to shallow-draft vessels. The shallow conditions make these areas inaccessible to vessels that would otherwise lease the available mooring locations from the Village. Dredging in both the mooring areas would eliminate this problem.

The Village leases mooring locations on both a seasonal and transient basis. At present, the lessee must supply their own ground tackle at all but one location in the mooring field. The Village provides the ground tackle at this one location, which is utilized for transient moorings during the summer boating season. The boating season runs from April 1 through October 31; all vessels must be off the moorings by November 1. The ground tackle should have a winter stake installed or be removed from the water by December 1. The Village also requires that all ground tackle be inspected every two years by a private contractor hired at the owners expense. A copy of the inspection report must be submitted to the Harbormaster. The owners of ground tackle are responsible for maintaining their equipment. If notified by Harbormaster that their lines must be repaired or replaced, the owner must undertake such action within 24 hours of notification.

The Harbormaster established mooring regulations that were passed by resolution of the Village Board in January of 1995. These regulations set standards for mooring equipment and establish the biannual inspection of ground tackle as a Village policy.

Typically, the Village has a long waiting list for mooring leases. The Village allows each former lessee the opportunity to renew their lease prior to March 1. Thereafter, these locations become available for open leasing. During 1997, approximately 98 percent of the demand for mooring leases was satisfied. Forty people are on the waiting list for the 1998 boating season.

- *Sag Harbor Yacht Club*

Sag Harbor Yacht Club (SHYC) is a private facility located on Bay Street, to the immediate east of Marine Park. Dockage is provided for 75 vessels, both sail and power, up to a maximum length of 140 feet. This facility also has a vessel pump-out station. The SHYC has an easement agreement with the Village for the dock area that extends off the bulkhead located just west of the Village sewage treatment plant. (This is the same bulkhead that provides access to the Village dinghy dock). Under this easement agreement, the yacht club must maintain the triangular parcel of shore front property situated behind the bulkhead with

landscaping and a dumpster. The SHYC utilizes the eastern portion of the Marine Park boat basin. The yacht club maintains approximately 12 boat slips along the south and east sides of this basin. Services provided by the SHYC include showers, laundry, electric and a fueling dock.

- *Sag Harbor Sewage Treatment Plant*

The Sag Harbor Sewage Treatment Plant (STP) is located on Bay Street in the Village of Sag Harbor. The plant is situated at the water's edge and discharges treated wastewater directly into Sag Harbor via a single ten-inch diameter, cast-iron outfall pipe which extends through the bulkhead seawall. The STP outfall pipe may be above or below sea level, depending on the stage of the tide. This facility and its service area are discussed in Section 2.3B(e).

The Village of Sag Harbor collects vessel wastes at two pump-out facilities. Both facilities are available for use at Marine Park, free of charge, to any vessel operator. One pump-out station is a stationary facility that is attached to the Marine Park bulkhead; the other pump-out is a mobile facility. Use of these facilities must be arranged through the Harbormaster. All of the vessel wastes collected by these systems are stored in an underground tank. This tank is emptied by a private contractor and the wastes are hauled to the Suffolk County Scavenger Waste Facility at Bergen Point, in the Town of Babylon, for treatment and disposal. In addition, there are two Town of Southampton pump-out vessels. Vessel wastes are discussed in further detail in Section 2(e)3.

- *Sag Harbor Yacht Yard*

Sag Harbor Yacht Yard is a full-service boat repair and storage facility located on Bay Street, to the immediate east of the Sag Harbor Yacht Club (and the Village sewage treatment plant). This facility services both commercial and noncommercial craft. The yacht yard provides year-round dockage for 25 vessels, both sail and power, up to a maximum length of 50 feet. Services offered at this facility include a full range of boat repairs, a 35-ton lift, and showers. The Sag Harbor Yacht Yard has negotiated a lease agreement with the Village of Sag Harbor to utilize 31,265 square feet of land area in the southeastern portion of the Village-owned property (located to the immediate west of the Yacht Yard site) for boat storage purposes. The Yacht Yard had previously leased the smaller, waterfront area in the northeastern portion of this property.

The Village of Sag Harbor acquired the (former) Mobil Oil property in 1994, and utilizes the area behind the STP for an additional parking area. Because the Mobil Oil property previously contained aboveground fuel storage tanks, and has undergone extensive remediation, the development of offices, residences or schools on this site is prohibited. The Village is also leasing the eastern portion of this property to the Breakwater Yacht Club, who constructed a sailing school along the shore, and the Sag Harbor Yacht Yard boat storage.

The *waterfront functional area* contains the full extent of the water-dependent uses located in the Village. This area is coincident to the *Harbor Water Use District*, which contains the mooring areas and navigation channels, and is an area of considerable boating activity.

The substantial waterfront park and marina development in the waterfront area gives it an open rather than a built-up character. However, the visual quality and general organization of the development along West Water Street/Long Island Avenue and Bay Street, which provide access to properties in the Village business center as well as to those in the waterfront area, is inconsistent and deficient in many instances.

Activities in the *waterfront functional area* include recreational and charter boating, fishing, strolling, passive viewing and excursion boat passenger arrivals and departures. Fishing takes place at Long Wharf. Long Wharf is also the landing place for upwards of 300 excursion boat passengers per day on summer weekends. The Windmill Tourist Information Center is located at the foot of the wharf to serve these and other tourists. However, experience indicates that the number of excursion boat tourists at peak times exceeds the capacity of the windmill facility to expeditiously provide service.

The 1.1 mile shoreline in this area offers an outstanding opportunity for public access to what can be a very attractive waterfront development, including a shoreline promenade. Although most of this shoreline is in public ownership, a few private property owners do have sites that interrupt the continuity of shoreline access.

5. Village Central Business District Functional Area

Village Central Business District (CBD) activity, and most of the principal historic buildings, are concentrated near the waterfront, reflecting the Village's historic function as a seaport. This functional area extends along the east and west sides of Main Street, encompassing the core area of commerce activity. This area contains a mix of retail and commercial businesses as well as a number of public facilities. Tourists and other visitors to the area utilize the CBD and the waterfront areas, which both provide a mix of opportunities for recreation, shopping, dining, and other enjoyable passive activities. The entire area is zoned VB - Village Business (Figure 3), and represents the only VB zoning district in the Village (see Section 2.3A(c) for further detail).

There are approximately 50 acres in this overall area. Main Street, the central business artery, extends from Long Wharf, generally southward, subsequently becoming the Bridgehampton-Sag Harbor Turnpike (C.R.79). The business frontages in the CBD have shown notable improvement in conditions and character as the result of a Village rehabilitation program. However, there is still much to be done at the rear of many of these properties. Division Street delineates the boundary between the Towns of Southampton and East Hampton. It is located only a short block east of, and parallel to, Main Street in the business center. Generally both the street improvements and the properties facing on the first

two blocks of Division Street, south of Bay Street, need work to achieve their potential utilization and an attractive environment. The intersection, open space, and buildings at Division Street and Washington Street/Burke Street have a particularly attractive potential. East Hampton-Sag Harbor Turnpike (N.Y.S. Route 114) enters the Village from the east on the Hampton Road and Hempstead Street alignments, intersects Division Street at the edge of the business center, and then continues over the bridge to North Haven and the ferry to Shelter Island. Thus, Division Street has particular importance as an entrance to the Village business center and commercial waterfront.

The Village business center is only beginning to achieve some feeling of design continuity. In the past, projects have been considered individually with the resulting lack of overall visual cohesiveness. Since the *waterfront functional area* is both a major open space attractive to residents and visitors alike, and one of the Village's "front-yard gateways" into the Village CBD, its visual and functional quality have a substantial impact on the first impression of thousands of visitors to the Village. Therefore, its close integration with the Village business center is a particularly important feature. The Village's Board of Historic Preservation and Architectural Review has taken this into consideration and has established specific design criteria to ensure that current and future projects in this area are visually and aesthetically compatible with the historic character of the Village.

A second "front-yard gateway" to the Village center lies along Hampton Road/Division Street. In addition to the opportunity to preserve these buildings, one building deserves particular attention. It is the Bulova Watchcase Factory building which occupies an entire block opposite some of the Village's most attractive historic homes. In addition the Village parking area, at the corner of Washington and Division Streets, provides an open space which is in part landscaped so that the Bulova Watch Case Company can be viewed from some distance north along Division Street. As discussed in Section 2.3A(e), this site is proposed for redevelopment.

The Long Island Regional Planning Board recommends that communities which seek to improve and strengthen their CBDs should consider reviewing their ordinances. The character of each community will determine which uses are compatible or incompatible. Ordinances that prohibit incompatible uses and encourage maximum pedestrian access and amenities, such as landscaping, buffering, sign and architectural regulations, are the most effective in strengthening CBDs.

Finally, the Board states that a tourist oriented CBD, such as that in Sag Harbor, necessitates public accommodations. Hotel/motel facilities would be a supportive use. Other supportive activity centers in Sag Harbor include the surrounding resort area, and the immediate waterfront community with its extensive boating and fishing resources.

6. Resort Motel Functional Area

The *resort motel functional area* is located in the western portion of the Village, adjacent to the waterfront. This district is situated between West Water Street and Long Island Avenue, south of the Sag Harbor Cove West Marina and Village **A** and **B** docks. This area contains two medium-sized motel facilities that provide year-round accommodations. This area is zoned RM-Resort Motel District, and represents the only RM district in the Village (see Section 2.3A(c) for further discussion of this zoning classification).

During the summer season, resort motel accommodations are generally at capacity. Occupancy is very low during the off-season. There has been some indication that Sag Harbor might have interest for tour groups and mini conferences during the off-season.

Suffolk County town officials have been concerned about the conversion of motels/hotels into condo/coop ownership and its impact on the tourist industry. Their fear is that eventually there will be a shortage of public tourist accommodations. "For all the new construction that has occurred over the last few years there has been a corresponding loss in existing accommodations, especially in resort areas."[3] Some motels, especially in eastern Suffolk County, have been converted to seasonal or year-round apartments or condominiums.

Sag Harbor has experienced an increasing number of weekend and long-term visitors. Their modes of travel include automobile, bus, excursion boat, private yacht and smaller recreational craft. With its attractive environment and unique concentration of historic buildings, winter tourism, conferences, and seminars might be a possibility provided that a package of quality accommodations could be made available.

(b) Surface Water Use

The waters of Sag Harbor are utilized extensively for recreational boating and shellfishing, and to a lesser degree for other marine recreational activities. Historically, the Sag Harbor area was an important port-of-call and supported a significant whaling industry. After the whaling activities declined, trade and over-water transshipment became commonplace. In the 1800s, the local roadway system on Long Island was underdeveloped and long distance highway travel was arduous, and nearly impossible in foul weather conditions when the roads became thick with mud. Therefore, sea travel for both passengers and material goods was the most convenient mode of transport.

Today, the Sag Harbor area contains a number of marinas and docking facilities and supports an extensive boating industry. The local waters are a popular destination for tourists and

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[3] Ibid p. 47.

summer boating enthusiasts, which helps to fuel the Sag Harbor economy. The bottom lands in the Sag Harbor Cove Complex and Sag Harbor Bay also are host to a variety of shellfish that support a local industry. Although shellfishing activities, in particular the scallop harvests, were impacted due to widespread outbreaks of the brown tide, this species has revived in the past few years. In addition, there are other shellfish varieties that are harvested in these waters, as discussed in Section 2.3A(d). Aside from recreational boating and shellfishing, charter boats and a passenger excursion boat frequent Sag Harbor waters. Swimming and water skiing are also popular sports, although these activities are restricted to Sag Harbor Bay waters and are regulated by the Village as well as the Towns of Southampton and East Hampton.

The Sag Harbor Village LWRP, when adopted in 1986, established three water use districts (i.e., the *Harbor District*, the *Low Intensity District*, and the *Conservation District*) for controlling the intensity of water uses within the Sag Harbor Cove/Bay Complex (see Figure 3). These districts, as they are presently defined, are described as follows.

- *Harbor District (HD)* - This area extends from the western side of the Marine District, east to the breakwater. This area is designated for intensive boating and commercial harbor uses, and encompasses four private marina facilities, the Village mooring area, the Long Wharf, the Sag Harbor Village sewage treatment plant, and two Village marine-recreational facilities. It is subject to a considerable amount of vessel traffic and other marine-related activities during the summer boating season.

  The *Harbor District* was designed as a means of controlling marine commercial and recreational activities by limiting these activities to a specific area of the waterfront. (In-water uses, such as swimming, are not permitted in this area due to vessel congestion and water quality problems). Such action would help to strengthen the economic base of this area and protect important natural and historic resources located outside the district boundaries.

- *Low Intensity District (LID)* - One area within the Sag Harbor Cove/Bay Complex has been designated as a *Low Intensity District*. This area extends from the breakwater east to the eastern boundary of the Village. The *LID* was designed as general boating area, where intensive boating activities would not be permitted. Although swimming occurs in the vicinity of the private beach associations along the shoreline of Sag Harbor Bay, Haven's Beach is the only formally-designated swimming area in this general vicinity. The *LID* primarily contains residential uses along the shoreline and is subject to a limited amount of vessel traffic.

- *Conservation District (CD)* - There are three Conservation Districts within Village waters. One *CD* area is located at the western end of the Village and encompasses the waters within Upper Sag Harbor Cove, Morris Cove, Otter Pond, Maple Swamp

feeding Otter Pond, and those portions of Ligonee Brook and Inner Sag Harbor Cove that fall within the boundaries of the Village. Another *CD* area includes that portion of Round Pond that is located within the Village. The other *CD* area encompasses that portion of Little Northwest Creek that is located within Village boundaries, and Rattlesnake Creek. These areas were designated as a means of protecting the sensitive natural resources (e.g., marshes and tidal flats) found therein, and to preserve and protect water quality and resources located within areas subject to poor tidal flushing. The *CD* is subject to very limited recreational and boating activity in the Upper/Inner Sag Harbor Cove areas; Little Northwest Creek is part of a NYSDEC protected wetland preserve and access is restricted by permit. Construction of shoreline hardening structures (e.g., bulkheads and retaining walls) in the *CD* should be avoided.

(c) Zoning

Chapter 55 of the Village of Sag Harbor Code contains the Zoning Regulations. This Ordinance established seven zoning classifications that regulate land use in the Village (as shown on Figure 3). The relevant portions of these classifications, as they apply to the LWRP, are discussed as follows.

- *R-2O One-Family Residence District.* As shown on Figure 3, this zoning district is the principal residence district in the Village. According to the Zoning Code, private moorings, docks and similar marine structures, situated in tidal wetlands and waterways, are permitted as accessory uses in R-20 districts pursuant to Chapter 53 (Waterways Law) of the Village Code. It also requires the following:

  - Preservation of a minimum of 50 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state;
  - Preservation of all natural vegetation located within 25 feet of the mean high water line or the upland edge of tidal or freshwater wetlands and beach and dune habitats;
  - Lot coverage by principal and accessory buildings and structures not to exceed 20 percent of the lot area;
  - No fertilized vegetation shall be planted or installed within 25 feet of the mean high water line or the upland edge of any tidal or freshwater wetland or beach and dune habitats; and
  - Individual sewage disposal systems must be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.

- *MIR Moderate Income Residence District.* The MIR zoning classification has a minimum lot size requirement of 40,000 square feet and establishes minimum lot area standards per

dwelling unit for various styles of multi-family developments (e.g., 1,000 sf. of lot area per unit in a congregate care facility or 2,500 sf. per one-family dwelling unit). The zoning map shall only be amended to include MIR districts after the criteria set forth in the Zoning Code has been met. Private moorings, docks and similar marine structures, situated in tidal wetlands and waterways, are permitted (as a *last resort* measure) as accessory uses in MIR districts pursuant to Chapter 53 (Waterways Law) of the Village Code. Furthermore, MIR developments must be located on sites that are served by both public water and sewage systems. Other requirements include the following:

- Preservation of a minimum of 35 percent of the site area as natural or landscaped open space;
- Preservation of all natural vegetation on the site that is located within 25 feet of the mean high water line or the upland edge of tidal or freshwater wetlands or beach and dune habitats;
- No fertilized vegetation shall be planted or installed within 25 feet of the mean high water line or the upland edge of any tidal or freshwater wetland or beach and dune habitats;
- Individual sewage disposal systems must be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats; and
- Lot coverage by principal and accessory buildings and structures shall not exceed 35 percent of the lot area, except not to exceed 40 percent for a nursing home, health related facility or adult proprietary home.

• *MF Multiple-Family Residence District.* Multiple-family districts were designed to provide for a limited number of small scale multiple-family residential developments in the Village. Recognizing the potential impact of the projected residential density in this district, it shall be located only on sites served by both public water and sewerage systems. Whether sold as private units or individually rented, provisions must be made for the management and maintenance of common areas and facilities. The MF zoning classification has a minimum lot area requirement of five acres, with a maximum density of six dwelling units per acre. Additional requirements include the following:

- Preservation of a minimum of 50 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state;
- Preservation of all natural vegetation located within 25 feet of the mean high water line or the upland edge of tidal or freshwater wetlands and beach and dune habitats;
- No fertilized vegetation shall be planted or installed within 25 feet of the mean high water line or the upland edge of any tidal or freshwater wetland or beach and dune habitats; and

- Individual sewage disposal systems must be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.
- Lot coverage by principal and accessory buildings and structures shall not exceed 25 percent of the lot area.

The only MF Multiple-Family Residence zoning district in the Village comprises a single, contiguous parcel located on West Water Street, immediately east of the Redwood peninsula. This property is situated within the *Western Residential Functional Area.*

• *RM Resort Motel District.* The RM zoning classification was established to provide potential sites for resort motels to accommodate the needs of short term vacationers and transient travelers. The intent of this zoning district was to cluster resort motels in close proximity to each other and to the Village business center to encourage use of these facilities for business seminars and mini conferences in the off-season. The RM district is not intended to be converted into multiple dwellings for long-term residents. The RM zoning classification has a minimum lot area requirement of 55,000 square feet with a maximum density of 35 transient guest units per acre. Such developments shall be located only on sites easily accessible to supporting facilities and served by both public water and sewerage systems. Additional requirements include the following:

- Preservation of a minimum of 25 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state; and
- Individual sewage disposal systems must be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.

• *VB Village Business District.* The VB Village Business zoning classification was designed to be promoted as the economic center, which supports significant recreational and tourism activities. Any administrative procedure or review process that influences the quality of land use and development in this zoning district must emphasize accessibility for pedestrians as well as vehicles, adequate off-street parking, and an attractive business environment which includes the provision of landscaped open space. Providing for both public and visual access to the shoreline and Harbor District through properties within the VB Village Business District is of particular concern. Development proposals within the VB Village Business District must provide for on-site stormwater drainage controls in an effort to protect both surface and groundwater quality, and for both public water supply and sewerage systems. The minimum lot area requirement in the VB Village Business District is 10,000 square feet; additional requirements include the following:

- Preservation of a minimum of 3 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state; and
- Individual sewage disposal systems must be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.

• *WF Waterfront District.* The WF Waterfront District zoning classification was established to ensure that the maritime character of the Village's seaport area, and the economic benefits derived thereof, will be preserved and continued. This classification was designed to: maximize public access to the shoreline from both onshore and offshore points; protect views of the harbor and/or shore front from certain vantage points; and restrict land use and development along the shoreline to water-dependent and water-enhanced uses that would serve to enhance the maritime character and tradition of the Village. The WF Waterfront District classification has a minimum lot area requirement of 40,000 square feet; other requirements include the following:

- Lot coverage by principal and accessory buildings and structures shall not exceed 40 percent of lot area;
- Accessory uses permitted in the WF Waterfront District must be located on the same lot with the principal use;
- Accessory uses that are not water-dependent must be located as far away from the shoreline as possible;
- Preservation of a minimum of 30 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state; and
- Individual sewage disposal systems must be located a minimum of 100 feet from the mean high-water line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.

The area of the Village that is zoned WF Waterfront District extends east from the Sag Harbor Cove West Marina to the western side of the Cor Maria property. With the exception of a small area located between Rysam Street and Dering Road, this district does not extend south of West Water Street/Bay Street. This zoning district comprises the majority of the *waterfront functional area.*

• *MA Marine District.* The MA Marine District covers both sides of the Redwood Canal along the north side of Redwood Road, and encompasses the Ship Ashore Marina property (this area is designated as a *waterfront functional area*). The MA Marine District was created for this area because it has supported marine uses for many years and the general character of these uses are found to be appropriate for this location. The MA Marine District

designation was further intended as a means of preventing potential adverse impacts that could result from increased or more intensive marine uses in this area, and to assure their future compatibility with both the surrounding residential uses and the fragile ecological character of Upper Sag Harbor Cove. The MA Marine District classification has a minimum lot area requirement of 40,000 square feet, and permits the establishment of residential uses, residential community facilities, public utility uses, and marinas. Marinas are only permitted provided that:

1) no adverse impacts result to groundwater of the Village, and impacts to the ecology of adjacent tidal waters are minimized;

2) sanitary restrooms, pump-out facilities, holding tanks and sewage disposal systems are provided in accordance with the regulations of the Village, the Suffolk County Department of Health Services, and New York State;

3) provisions are made for the collection and disposal of boat-generated solid wastes;

4) outdoor lighting is not projected into or visible from neighboring upland properties, and is not more than ten feet above the ground or dock structure (excluding appropriate navigational aides deemed necessary by the Village); and

5) fuel storage facilities are adequately contained so as to prevent spillage, leakage or damage from storms and are set back at least 50 feet from the mean high water line. Fuel pumps may be located conveniently to service boats, provided that precautions are taken to prevent spillage into tidal waters. In no case can fuel storage or service pumps be located less than 100 feet from adjacent property lines or can any fuel storage tanks be constructed above ground. The recommendations of the Village Fire Chief, the Town Bureau of Fire Prevention and the National Board of Fire Underwriters must be considered with respect to the siting and construction of all fuel storage facilities.

Additional requirements include: the preservation of a minimum of 30 percent of the site area as natural or landscaped open space but not less than all existing areas of the site that contain tidal or freshwater wetlands, and beach and dune habitats which are to be preserved in their natural state; and that individual sewage disposal systems be located a minimum of 100 feet from the mean highwater line or the upland edge of any tidal or freshwater wetland or beach and dune habitats.

In addition to the regular districts, Chapter 55 - Zoning, has two special overlay districts - one is the Historic District. It provides for a review commission (the Board of Historic Preservation and Architectural Review) which is charged with maintaining the character of the Historic District in the process of approving building permits and with the designation of landmarks. The second special district is the Tidal Flood Hazard Overlay District. It

provides further standards for buildings and structures to be located within the flood hazard zones established by the Federal Emergency Management Agency.

In terms of the LWRP area, all the zoning districts except for the MIR Moderate Income Residence District are mapped. The most important districts, in terms of the extent of shoreline affected or the degree to which water-dependent uses are permitted and protected, are the R-20 One-Family Residence district, the WF Waterfront district, and MA Marine district.

The R-20 One-Family Residence designation is found along the Village shoreline. Most of this land area is already developed. Some individual vacant lots are located in the *eastern, western, and central residential functional areas*, but very few are located directly on the waterfront and their relative size would not result in significant waterfront development if these sites were developed. However, the Cor Maria Retreat and Haven's Beach properties are both located within an R-2O district, in the *eastern residential functional area*. These properties both exceed 15 acres in size and could potentially yield a large number of residential units if developed. This could result in significant impacts to waterfront resources.

The VB Village Business is focused on the village *central business district functional area*, located on Main Street from frontages on Long Island Avenue and Bay Street south to limited frontages on Spring and Sage Streets. It includes the Bulova Watchcase Factory site.

In general, the current location of multiple dwellings and other intensive land uses are limited to areas served by the Village sewage system. It is anticipated that this will continue to be true in the future.

(d) Water-Dependent and Water-Enhanced Uses and Commercial Fishing

Water-Dependent Uses

Water-dependent uses contribute significantly to the long-term economic vitality and public enjoyment of coastal areas. A water-dependent use is a use that requires a location on, in, or directly adjacent to the water in order to function or exist.

As discussed in Section 2.3A(a)4, the Sag Harbor Village *waterfront functional area* contains a number of water-dependent uses. These comprise both public and private facilities, and include the Sag Harbor Yacht Club, the Sag Harbor Yacht Yard, four private marinas, the Sag Harbor Village docks, Marine Park (a Village facility which includes the Sag Harbor boat basin), the sewage treatment plant, Haven's Beach and Park and a number of boat launching ramps. In addition, Village-owned waterfront is developed with a community sailing school, which is a water-dependent use.

Typical sites for water-dependent uses (i.e., swimming, access to sculls and other small boats) in the functional residential areas located east and west of the Harbor District, include private homeowners' association beach facilities along Sag Harbor Bay and private docks and boat basins in the Sag Harbor Cove Complex. The Sag Harbor Village Harbor Management Plan contains a more extensive discussion of many of the water-dependent uses located along the Sag Harbor Village waterfront.

Water-Enhanced Uses

A water-enhanced use does not require a location on or adjacent to the water in order to effectively operate, but derives certain benefits from a waterfront location, such as the increased enjoyment level of the users. Water-enhanced uses in the LWRP area include restaurants, resort motels, private residences, the Long Wharf promenade (and the individual uses contained therein), Windmill Park, and the Cor Maria Retreat.

Commercial Use of Fish and Wildlife

Estuary

- Sag Harbor

Sag Harbor is contiguous with Northwest Harbor in East Hampton, and is part of one of the most significant bay scallop fisheries in the region. These waters contribute significantly to the scallop fishery on the Long Island. Oysters (*Crassostrea virginica*) are also present in this area in limited numbers.

- Sag Harbor Cove Complex

The waters of the Sag Harbor Cove Complex offer the widest variety to commercial fisheries in the Village of Sag Harbor. The most significant species harvested in this area is the soft-shelled clam (*Mya arenaria*); this fishery provides income for eight to 10 part-time baymen throughout the year. Hard clams (*Mercenaria*) are less significant, but can be found. Oysters (*Crassostrea virginica*) were harvested here in great numbers in the past, but have not been seen in the Cove Complex in many years (Semmlear, pers. comm.). It remains to be seen whether these animals will survive. Similarly, bay scallop production in recent years has been very poor, but demonstrated a remarkable recovery in the 1994 season. Unfortunately, an increasingly larger area of the cove (14 additional acres in 1994) has been either seasonally or permanently closed to shellfishing due to poor water quality (NYSDEC, 1994).

Freshwater Systems

There are no known commercial uses for the fish and wildlife resources from the freshwater systems in the Village. At one time trapping of fur bearing mammals was significant in the area (i.e., mink and fox), but this is no longer the case.

(e) Deteriorated, Abandoned or Underutilized Areas, Buildings, and Structures

Since the LWRP was adopted in 1986, the Village has addressed a number of the deteriorated and underutilized sites identified in the original document. There are a number of sites, however, that still require attention.

Properties Related to the Former Mobil Fuel Storage Property

The former Mobil property consists of two parcels with frontage on Bay Street. The largest of the two parcels is situated on the north side of Bay Street, along the waterfront. This property formerly contained aboveground petroleum storage tanks. These tanks were removed and the site contamination has been remediated. The Village of Sag Harbor purchased the waterfront portion of this parcel in 1975; the remainder of the parcel (north to Bay Street) was acquired by the Village in 1994. Due to restrictions in the deed, this site cannot be improved or developed with residences, office buildings or schools. The Village utilizes the western portion of this parcel for additional parking and waterfront public access. The eastern portion has been leased to the Sag Harbor Yacht Yard for boat storage, and the Breakwater Yacht Club for the establishment of a sailing school on the waterfront. The dock that extends off the shore front of this property is utilized by the Village.

Mobil's second parcel, which is located on the opposite side of Bay Street, has an area of approximately one-half acre. It is improved with a one-story industrial building. Although the Village owns the waterfront portion of the former Mobil property, this parcel is still privately owned. This property remains in a deteriorated and underutilized condition. Mobil currently leases storage space on this site, but the property is unsightly and the existing structures on the site are in need of upgrading.

Bulova Watchcase Factory Building

The Bulova Watchcase Factory building is a four-story, 73,000 square-foot, brick building. It is vacant but considered to be in satisfactory condition. It is a landmark building located within the Sag Harbor National Historic District and within the VB Village Business Zoning District. Considering its central location (approximately 14 miles from the Sunrise Highway and only six miles from the East Hampton Airport) as well as the economic needs of the Sag Harbor community, the Village originally thought that the best use for this building would be industrial or a hotel/conference center. However, based on marketability the Village has

approved a conversion to residential condominiums. The capacity of the sewage treatment plant has been expanded to accommodate these condominiums.

The Bulova Watchcase Factory property is presently undergoing remediation to mitigate soil and groundwater contamination problems resulting from the former use of the site. As discussed in Section 2.3B(d)2, this action was commenced in 1994 and will take possibly up to five years to complete. The conversion of this unutilized structure can proceed at the owner's option.

(f) Public Access and Recreation

1. Public Trust Doctrine

New York, upon attaining Statehood, succeeded the King of England in ownership to all lands within the State not already granted away, including all rights and title to the navigable waters and the soil under them (Public Lands Law, section 4; People v. Trinity Church, 22 N.Y. 44, 1860; Langdon v. Mayor, 93 N.Y. 129, 1883). Broadly speaking, the State holds title to the vast stretches of foreshore and submerged lands along the Atlantic Ocean and Long Island Sound, and all underwater lands not otherwise conveyed away by patents or grants. The State holds title to these tidelands and submerged lands in its sovereign capacity in trust for the use and enjoyment of the public, under the *public trust doctrine* (People v. Steeplechase Park Co., 218 N.Y. 459, 1916; Appleby v. City of New York, 271 U.S. 364, 1926; Coxe v. State, 144 N.Y. 396, 1895). This legal doctrine emerged from the ancient concept that the King had the right of way, an "incorporeal hereditament," to all navigable streams and waterways; the underlying theory being the protection of the public interest in fisheries and navigation.

The Public Trust Doctrine provides that underwater lands and foreshore lands (i.e., lands between the high and low tide lines or mean high and low water lines) be held by the State of New York in trust for the people, who have certain rights in these lands. When the foreshore is covered by the tides, the public may use the water covering the foreshore and underwater lands for boating, bathing, fishing, recreation and other lawful purposes. When the tide is out, the public may pass over the foreshore as a means of access to reach the water for these purposes, may travel along the foreshore, and may lounge and recline on foreshore lands, provided that such activity does not cause impairment of habitat areas.

State title to the public foreshore and submerged lands, and the power of disposition, is incident and part of its sovereignty which cannot be surrendered, alienated or delegated, except for some public purpose or some reasonable use for the public benefit, and without impairing public rights in the remaining lands and water. Inherent in the nature of public trust lands is that they support diversified and important ecosystems without which many public rights, including fishing, swimming and the like, would be impossible to enjoy. The

public interest demands the preservation and conservation of this vital natural resource against pollution, overuse, destruction and infringement by others, whether public or private.

It is in the public interest that State, Town and other governmental ownership of public trust lands be maintained and when possible recovered from private ownership. Where full public ownership no longer exists, the application of the Public Trust Doctrine requires that any remaining rights of the public to use such lands should be preserved and protected for present or future enjoyment.

Occupation of public trust lands by littoral and riparian owners for purposes of gaining access to navigable waters should be undertaken in a reasonable manner which does not unnecessarily interfere with the public's right of passage upon, and use of the waters overlying such lands, and other public trust purposes. Considerations of public safety, resource protection and the need for access at a given location may be utilized as factors in determining the level and types of access to be provided. Public use of publicly-owned foreshore and underwater lands, and lands immediately adjacent to the shore shall be discouraged only where such use would be inappropriate for reasons of public safety, military security, or the protection of coastal resources.

Physical access to trust lands is often hindered by natural features, development conditions, or land ownership patterns along the shoreline. The presence of high bluffs, for example, will effectively block land-side access to the adjacent beach. In some areas, the intertidal portion of trust lands have been entirely eliminated, as has occurred where bulkheads extend into the littoral zone. In some areas where intertidal lands remain, access to these lands by the general public is blocked by the presence of private property along the waterfront. Importantly, the Public Trust Doctrine does not grant the public the right to pass over private property in order to gain access to the trust lands beyond. In some cases where public lands are present on the shore front, perpendicular access to trust lands is limited by residency restrictions, such as are typically applied to municipally-owned parklands. In other areas, lateral access along the public foreshore is obstructed by docks, groins, and similar structures.

Underwater Land Ownership

The ownership of the underwater lands in the Sag Harbor Cove/Bay Complex is divided between the Town of Southampton and the State of New York. The boundary line for these lands was originally delineated by the original bridge that spanned the inlet between Sag Harbor Village and the Village of North Haven. Today, this dividing line is defined as running from the location of the old bridge abutment on the south shore of the North Haven peninsula to the residence owned by Rose Black, which is located along the shore front of Sag Harbor Village, west of the North Haven/State Route 114 Bridge (see Figure 4). The Town of Southampton owns the underwater lands located west of this line, within Sag Harbor Cove, and the State owns the bottom lands to the east.

- *New York State Underwater Land Ownership*

The colonial governors acting as agents of the Duke of York, whose own title originated from a direct grant of the King, made grants of land on Long Island (among other places) to settlers to establish towns. These grants conveyed to the towns or town trustees the Crown's title to uplands and underwater lands within the boundaries of the patent. They also constituted recognition of Long Island towns as corporate entities by English authority. The patent boundaries generally extended to the outer limits of the mouths of creeks, rivers, harbors and bays. The royal patents did not include the waters or underwater lands in Peconic Bay, Gardiners Bay, or Long Island Sound, and extended only to the high water mark along the shores of these water bodies.

Upon attaining Statehood, New York, in its first Constitution confirmed the colonial patents indirectly in declaring that "such parts of the common law of England... and the acts of the legislature of the colony of New York, as together did form the law of said colony" on April 19, 1775, and "shall be and continue the law of this state" (the New York Constitution of 1777, Article XXXV). The Constitution of 1777 also confirmed and ratified the proprietary and governmental powers in the town trustees. New York, upon attaining Statehood, also succeeded the King of England in ownership to all lands within the State not already granted away, including all rights and title to the navigable waters and the soil beneath them (Public Lands Law, Section 4; People v. Trinity Church, 22 N.Y. 44, 1860; Langdon v. Mayor, 93 N.Y. 129, 1883). The uplands and submerged land described in the colonial patents remained vested in the towns as confirmed by the first New York Constitution and subsequent State Constitutions.

As noted above, Peconic and Gardiners Bays did not pass by colonial patent to any of the towns on eastern Long Island and the lands under those waters are in the possession of the State (Town of Southold v. Parks, 41 Misc. Rep. 456, 84 NYS 1078 Sup. Ct. Suffolk Co., aff'd. 183 N.Y. 513, 1905; Laws of 1884, chapter 385, as amended by the Laws of 18965, chapter 916). The State granted Suffolk County the authority to lease lands under these bays for shellfish cultivation, beginning at a point 1000 feet from shore (Laws of 1969, chapter 990).

State-owned underwater lands are managed by the New York State Office of General Services (OGS). The OGS issues grants and easements for these underwater lands. They also investigate encroachments on riparian rights and make sure there is no interference with navigation channels. The OGS also reviews the NYSDEC and ACE comments for proposed projects that affect State-owned bottom lands to ensure that the benefits to the public will not be deprived and that the environment will not be adversely impacted. The OGS strives to achieve satisfaction on the part of all parties involved prior to the issuance of a permit.

The State Office of General Services is the agency responsible for issuing permits for docks and other marine-related structures that are placed on State-owned underwater lands. In the

case of Sag Harbor Village, the OGS would be the authorizing agency for docks proposed in the Sag Harbor Bay area. The construction of any commercial dock or any private, noncommercial that exceeds 4,000 square feet in area (including perimeter area) would require a permit from the OGS. Noncommercial structures less than 4,000 square feet in size do not need a permit.

- *Little Northwest Creek*

The underwater lands in Little Northwest Creek were originally granted to the Town of East Hampton under their colonial patents. In 1972, the NYSDEC purchased over 190 acres of wetlands, meadows and uplands situated on the eastern and western sides of Little Northwest Creek with monies authorized under the Environmental Quality Bond Act. This acquisition included the transfer of ownership for the underwater lands from the Town of East Hampton to the State. All of these lands have been established as a State Conservation Area. Access into this area is granted only by a permit issued by the NYSDEC.

- *Town of Southampton Underwater Land Ownership*

The Town of Southampton holds ownership to all the bottom lands situated within Outer Sag Harbor Cove, Inner Sag Harbor Cove and Upper Sag Harbor Cove, including Morris Cove, Ligonee Brook and Otter Pond. These underwater lands were granted to the Town through colonial patents. The Andross Patent was issued in 1676 and conveyed the original land title to all common lands and lands beneath the creeks, streams, harbors and bays to the settlers of the Town of Southampton. The Dongan Patent was issued in 1686 and confirmed this original land grant. The Dongan Patent created the Southampton Board of Trustees to hold and manage all the unappropriated lands for the use and benefit of the freeholders of the Town. These colonial charters extended the boundaries of the Town of Southampton, as well as the other towns on Long Island, only to the outer limits of the mouths of creeks, rivers, harbors and bays, and no further unless a larger abutting bay of water was specifically named as being included in the grant. Thus, the Town of Southampton's ownership of the underwater lands in the Sag Harbor Cove complex extends only to the mouth of Outer Sag Harbor Cove (as shown in Figure 4), and gives them the proprietary right to allow the use of these bottom lands.

Underwater Land Grants

The underwater lands owned by New York State are generally located east of the North Haven/State Route 114 Bridge. These lands are managed by the New York State Office of General Services (OGS), which oversees the issuance of land grants and leases for these underwater lands. Seven underwater land grants have been issued by the State to various owners of upland shore front property along the Sag Harbor waterfront over the years. These grants were issued for the express purpose of either *commerce and beneficial enjoyment*. Grants issued for commerce were given to shore front businesses for more restricted activities and were usually written with conditions. If the conditions were not followed, the underwater lands would revert back to State ownership. Beneficial enjoyment grants were given to shore front property owners without restriction and provided more complete title to the underwater lands. In either case, the grantee was given full ownership rights. Grants for commerce were issued in the early part of the 1800's, and then the issuance of grants for beneficial enjoyment became more commonplace. Around 1890, the State began to restrict the grants issued for beneficial enjoyment as well.

As listed below and shown on Map 1 in the Harbor Management Plan, the State OGS issued a total of seven underwater lands grants in the Village of Sag Harbor. Four of the State grants were issued for commerce; three of these grants were issued in the 1800's. Upon a review of the original letters patents, it appears that the commerce grants were written without restrictions and provided the grantee with full ownership interest in the underwater lands. The remaining three grants were issued for beneficial enjoyment purposes.

Grantee	Date	Type
• Wm. Cooper & Jonathan Havens	October 30, 1845	Commerce
• East Long Island Pottery Co.	December 19, 1882	Commerce
• The Long Island Railroad	October 26, 1888	Commerce
• Socony-Vacuum Oil Co.	June 23, 1933	Beneficial Enjoyment
• The Village of Sag Harbor	February 3, 1956	Beneficial Enjoyment
• Agawam Aircraft Products	July 17, 1958	Commerce
• Sag Harbor Yachts, Inc.	October 16, 1968	Beneficial Enjoyment

In most of these cases, the grant lands consist of upland properties or portions of the upland that were formerly underwater lands that have been filled in. In situations where the upland ownership has changed since the grants were first issued, unless the State reconveyed the title to the underwater lands to the new property owner, the original grant to the original upland owner remains in effect. It is unclear whether some of the upland property owners were aware of the fact that their filled lands originally belonged to the State and that they did not actually hold clear title to them. In certain situations, the original upland owners were granted underwater lands in the 1800's by the Trustees of the Freeholders and the Commonality of the Town of East Hampton, who believed they owned all the underwater lands in Sag Harbor Bay

by virtue of their colonial patents. These lands, however, have been in the possession of the State since the termination of sovereign power, as discussed above; thus, the East Hampton Town Trustees had no authority to give the underwater lands away.

The underwater land grant issued to Wm. Cooper and Jonathan Havens in 1845 was released and surrendered, and the subject area was reconveyed by the State as a part of a larger land grant made to Agawam Aircraft Products, Inc. in July of 1958. In this case, the grant was made for the upland area which was once land underwater.

The grant issued to the East Long Island Pottery Company in December of 1882 was never utilized because this company never opened for business. This grant, however, is still shown to exist. The majority of the underwater land area authorized under this grant was absorbed as a part of a larger grant issued to the Long Island Railroad (LIRR) in October of 1888. This grant gave the railroad full interest in the underwater lands. The LIRR transferred ownership to a portion (about 75 percent) of these lands to the New York State Department of Transportation for the reconstruction of the North Haven/State Route 114 bridge at its current location. The State, in turn, conveyed its interest in these lands to Suffolk County, who reconveyed ownership to the Village of Sag Harbor. The LIRR still owns two small outlying areas of the original land underwater land grant area issued in 1888. These areas are situated on the east and west sides of the Village-owned underwater lands.

In 1975, the Village of Sag Harbor purchased all of the waterfront portion of the Standard Oil property (formerly Socony-Vacuum Oil Company). The lands sold to the Village comprised the former underwater land area that was granted to Socony-Vacuum Oil Co. in June of 1933. The grant issued to Socony-Oil in 1933 gave them full ownership to this land. This ownership was transferred to the Village of Sag Harbor when they purchased these lands from Mobil Oil Company in 1975.

In April of 1956, the Village of Sag Harbor sold a parcel of waterfront property they acquired in 1922 to Agawam Aircraft Products, Inc. (AAP). AAP added this parcel to its adjoining properties to gain ownership of a large block of waterfront property. The upland property sold by the Village to AAP comprised the former underwater land area for which the Village received a grant from the State in February of 1956. Since the State grant gave the Village full ownership to the underwater lands, this ownership was subsequently transferred to AAP.

The entire parcel of upland owned by Agawam Aircraft Products, Inc. (which was all formerly underwater lands) was sold in 1964. AAP had received a grant from the State for these former underwater lands in July of 1958. This property, which included the former Village-owned parcel which was sold to AAP in 1956, was sold two more times thereafter. These lands are presently owned by Malloy Enterprises.

In 1968, the State issued a grant to the Sag Harbor Yacht Yard. This grant remains in effect today.

Based on the information outlined above, the seven grants for underwater lands were all issued with full interest given to the grantee. Unless the upland was sold to another party, the ownership of the underwater lands remains with the original grantee; otherwise, the lands belong to the current upland owner. In the case of the grant issued to the East Long Island Pottery Company in 1882, this grant was never utilized. Therefore, this grant should be released and surrendered by the State. The six other underwater land grants have been accounted for.

There are, however, three waterfront properties that have been developed that do not have grants from the State OGS. These include: the underwater lands that contains the Waterfront Marina, owned by Malloy Enterprises; the former underwater lands that comprise the Village Marine Park property, which is owned by the Village of Sag Harbor; and the underwater lands and small area of uplands that comprises the Sag Harbor Yacht Club property. Grants for these lands should be obtained through the appropriate application process. In addition, since the Village of Sag Harbor owns a large portion of the original grant issued to the Long Island Railroad, they should seek to gain ownership of the two adjoining parcels of underwater lands still owned by the railroad.

There are generally three ways of securing a grant for underwater lands from the State Office of General Services. Each of the three methods provides a certain degree of ownership security in the underwater lands. An arrangement could also be worked out with the State OGS to for a combination of the three.

The method that provides the strongest interest in the property would involve the issuance of an underwater land grant per Section 75-10 of the Public Lands Law. This grant would provide the grantee with full and complete interest in the lands with no conditions or restrictions but at the full cost of the land.

The second method provides for the conveyance of the lands for public parks, beaches, streets, etc. to a public entity who holds upland ownership under Section 75-7A of the Law. The grantee would own the land in perpetuity as long as they fulfill the conditions of the grant. Therefore, this method would not provide the grantee with full fee conveyance in the property. The fee established for the value of the lands in this case is discounted because a reverter clause would be contained in the grant that restricts the use of the lands. If the lands are ever utilized for any other purpose aside from that specified under the terms of the grant (i.e., a commercial marina), the grantee would have to buy out the reversion interest in the lands.

The third option involves the issuance of an easement for the lands from the State OGS. Although this is the simplest process, it does not grant full interest in the lands. The State OGS would still retain ownership.

The Village of Sag Harbor should consider exercising the third option to obtain an easement for the underwater lands in the Sag Harbor area. The area located south of the main navigation channel, between the Long Wharf and the breakwater is utilized for mooring and other marine-

related uses. Through the issuance of an easement, the Village would have greater control over what activities occur in this area and to what degree.

2. Recreational Uses

The local waterfront revitalization area contains a variety of recreational uses which provide excellent opportunities for public access to Sag Harbor, Sag Harbor Cove Complex, and Sag Harbor Bay (Figure 4). The Village of Sag Harbor owns a significant amount of parkland along the shoreline in and around Sag Harbor. The recent acquisition of the remaining portion of the (former) Mobil property increases the Village-owned waterfront holdings in the WF Waterfront District to over six acres. This includes the Long Wharf, for which the Village has operational authority. Both passive and active, and public and private, the recreational uses in the LWRP area (including beaches, parks, marinas and boat launching ramps), represent a primary resource in this area. These facilities are discussed below and detailed further in the Sag Harbor Village Harbor Management Plan.

Publicly-Owned Waterfront Areas

- *Haven's Beach*

The Village of Sag Harbor owns an 18.8-acre public bathing facility, Haven's Beach, which is located off Bay Street along Sag Harbor Bay. Haven's Beach has been designated as a municipal beach pursuant to Chapter 27 of the Village Code. The beach is open for use by the public, and is the only location designated as a formal swimming area in Village waters. The entire *Harbor Water Use District* is off limits to swimming, and very little swimming occurs within the Cove Complex.

Haven's Beach is open in the summer season, from the last weekend in June through Labor Day. Although this facility is large, only the waterfront portion of the park is effectively utilized. Much of the land area consists of open lawn and meadow area that receives only limited usage. A limited area of the beach in the northeast corner has been allocated for seasonal (summer) storage of small sailboats and catamarans. An annual fee is charged to keep boats in this area; the fee is adjusted based on residency status. The main parking area is accessible from the loop road on the western portion of the site. In addition, a small supplemental parking area is located in the northeastern portion of the site, adjacent to the beach. This smaller parking lot is accessible from the main parking field via a narrow road which crosses over a drainage ditch near the waterfront. Residents and non-residents must secure a beach parking permit to park at Haven's Beach.

Existing recreational and sanitary facilities at Haven's Beach include a few pieces of play equipment, which are located adjacent to the beach, and one small building which houses a comfort station and the office and equipment for the lifeguards who supervise the facility. These existing recreational facilities, however, are limited in their ability to satisfy the recreation

demands of the Village's large summer population, as well as year-round residents. Sag Harbor's lack of adequate swimming facilities is its most pressing recreational deficiency. Presently, many Village bathers who would use Haven's Beach are instead using Long Beach - in Southampton Town. Improving the Haven's Beach facilities, along with its excellent location, will undoubtedly increase usage of this prime recreational area.

Just to the east of the active recreation area of the site there is a former marsh area which has been substantially filled in with dredge soil. Wetlands are present on the eastern and southern portions of the Haven's Beach property. A drainage ditch bisects the property and carries stormwater runoff from the adjacent upland. This runoff contains pollutants from roadways and sewage leachate from faulty septic systems. The creation of a wet detention system to capture and settle out contaminants in the stormwater runoff could improve the quality of the drainage reaching the receiving waters of Sag Harbor Bay.

- *Marine Park and Boat Basin*

As discussed in Section 2.3A(a)(4), Marine Park is a 1.9-acre, Village-owned and operated facility located on Bay Street. It is situated east of the Long Wharf, immediately east of the privately-owned area known as Waterfront Marina. Marine Park contains a boat basin, docking facilities along the bulkhead and the Village Harbormaster's office.

A traditional Village green has been created in Marine Park, with a veterans' memorial and flagpole centrally located and bordered by the access driveway/parking loop. A picnic area, with tables and grills, and a boardwalk with benches affords tourists and marina patrons additional waterfront access, scenic viewing, and recreational opportunities. The boat basin, located in the eastern portion of the park, contains a boat launching ramp which provides docking and access to the bay for residents. The parking lot at the eastern end of Marine Park provides access to the Village-operated dinghy dock, which is utilized by boaters who anchor their vessels in the adjacent mooring field, as well as the Sag Harbor Yacht Club.

The Village of Sag Harbor acquired the Mobil Oil property, which is located to the immediate east of Marine Park, in 1994. The Village has redeveloped the western portion, which abuts Marine Park, for additional parking area and additional common waterfront access which will include utilization of the former Mobil dock. The Sag Harbor Yacht Yard (located to the immediate east of the former Mobil site) has negotiated a lease with the Village for approximately 31,000 square feet of the former Mobil property to expand its boat storage facilities. The yacht yard currently had been leasing an 8,150 square-foot waterfront area that is located directly seaward of the new location they will be utilizing. Subsequently, approximately 7,250 square feet of this 8,150 square-foot Village-owned waterfront property, previously used by Sag Harbor Yacht Yard, was reissued to the Breakwater Yacht Club. The Breakwater Yacht Club has constructed a sailing school on this site.

- *Long Wharf*

As discussed in Section 2.3A(a)(4), the Long Wharf is located directly north of the intersection of Main and Bay Streets. The perimeter of the Long Wharf is used for strolling, scenic viewing, and fishing. Large recreational and commercial vessels dock alongside this structure or at the Village-owned floating dock and finger piers that are located on the west side of the wharf. Several benches are situated at various locations along the edge of the wharf, and a wooden guardrail allow users to rest and view the bay and vessels anchored or operating in the adjacent waters. The guardrail provides a safety barrier between the parking area/roadway on the interior of the wharf and the pedestrian area on the outer edge of the wharf.

- *Windmill Park*

Adjacent to the western side of Long Wharf is a parkland property known as Windmill Park. Windmill Park encompasses approximately 1.9 acres of shore front area that extends along both sides of the North Haven/State Route 114 Bridge abutment. A tourist information center, operating in the summer by the Village Chamber of Commerce, is the only building on the property and is housed in a windmill-type structure in the southeast corner of the park. Several park benches and a single picnic table are situated on the site. A wooden bulkhead on the east side of the bridge, west of the beach area, prevents erosion and fortifies the bridge abutment. This bulkhead also protects the plants which are located between this structure and the roadway.

- *Cove End Park*

This property, designated by the Village as a public park in 1997, is located at the end of Cove Road along the shore of Outer Sag Harbor Cove. The park provides a passive space for viewing the water. A dedication stone has been placed in the park.

- *Little Northwest Creek Conservation Area*

In 1972, the NYSDEC purchased over 190 acres of wetlands, meadows and uplands situated on the eastern and western sides of Little Northwest Creek with monies authorized under the Environmental Quality Bond Act. This acquisition included the transfer of ownership for the underwater lands from the Town of East Hampton to the State. All of these lands have been established as a State conservation area. Public access into this area is granted only by a permit issued by the NYSDEC.

Public Water-Related Recreational Resources

- *Village Anchorage Areas*

The Village of Sag Harbor operates two mooring areas in the WF Waterfront Zoning District. There is a large mooring area located between the navigation channel and the breakwater, and another, smaller, mooring area situated on the western side of the Long Wharf. Combined, these areas can accommodate up to 150 vessels, although the number varies depending vessel size. There are generally 130 usable moorings locations at all times.

- *Village A and B Docks*

As discussed in Section 2.3A(a)(4), the Village of Sag Harbor operates two docks in Outer Sag Harbor Cove known as the A and B Docks. These docks are located on West Water Street, in the cove area between Sag Harbor Cove West Marina and Sag Harbor Cove East Marina. The A dock is a fixed structure that provides 22 slips; the B dock is a floating structure which provides 50 slips for docking. The Village also provides 48 seasonal cable slips along the shoreline between the two docks.

- *Village Finger Docks (Long Wharf Marina)*

The Village provides dockage on the west side of the Long Wharf, known as the Long Wharf Marina. This floating dock contains nine finger piers for small vessels on its western side; in addition, vessels (including charter boats) can tie up along the eastern side, between the main floating dock and the Long Wharf.

Public Access to Waterfront Areas

- *Boat Launching Ramps*

Boat launching within the Sag Harbor Cove/Bay Complex occurs at both formal and informal launch areas (see Figure 4). There is one boat launching ramp located in the Upper Sag Harbor Cove area, on the north side of John Street, at the southern end of the Cove. Although not paved, this ramp is a more formalized location for water entry, which receives a considerable amount of use by local fisherman and baymen. Another undeveloped launch location is situated at the western terminus of Amherst Road, on the Redwood peninsula. This site provides access to Inner Sag Harbor Cove. Unlike the John Street facility, this launching ramp does not appear to be heavily utilized, since it consists of an unpaved access way that is somewhat overgrown with weeds and field grasses.

Two active launch ramps are located alongside the *Harbor Water Use District*. Redwood Marina, at the eastern end of the Redwood peninsula, adjacent to Cove End Park, has two metal ramps that provide access to Outer Sag Harbor Cove. The upland portion of this ramp is an unpaved,

gravel roadway. The other formal launching ramp is located within the Marine Park boat basin, which consists of a paved entry ramp that extends directly from Bay Street. This launching ramp is in need of repair. Seasonal and daily fees are charged for use of the Marine Park ramp.

• *Street Ends*

There are a small number of street ends that provide public access to the waterfront, particularly in the area of the Sag Harbor Cove Complex (Figure 4). On the Redwood peninsula, there are four street ends that provide limited waterfront access. These include the ends of Yale Road, Notre Dame Road, Amherst Road and Dartmouth Road. A fifth street end is located on John Street and pitches northerly into Upper Sag Harbor Cove. The street end at Notre Dame Road also is located adjacent to a pathway that extends along the shore for some distance. The ends of Yale and Notre Dame Roads provide sufficient access for passive activities, however, the street end on Dartmouth Road has become overgrown with vegetation which restricts public use in this area. The Village recently improved the street ends/boat ramps at Amherst Road and John Street to minimize the water quality degradation of adjacent receiving waters. Catch basins have been installed in the intersections at the upper end of these two boat ramps. Further improvements are necessary.

Semi-Private and Private Water-Related Recreational Resources

• *Otter Pond and Mashashimuet Park*

The Otter Pond Park and the Mashashimuet Park are semi-private properties that have been deeded to the children of Sag Harbor, by the Russell Sage Foundation. Although they are private facilities, they are open for full use by the public. Both private and public support contribute to the maintenance and preservation needs of these parks. A Board of Directors, appointed by the provisions of the deed, administers the affairs of the parks.

Public use of Otter Pond is permissible, but proposals for activities of a more organized nature must first be presented to and approved by the Mashashimuet Park Board, the overseeing agent. The Southampton Town Trustees own the underwater lands. The Village has no jurisdiction in this area.

Otter Pond Park is an 11.3-acre property located in the southwest portion of the Village. This park is bounded by Main Street on the west, and Jermain Avenue on the south. A nature walk with five benches located at various intervals, partially encircles the park and provide users with access for passive recreation and fishing. Otter Pond is hydraulically connected to Upper Sag Harbor Cove via a culvert through the west bank of the Pond.

Mashashimuet Park encompasses over 50 acres of land area and includes two separate open spaces areas (six acres which surround Fore and Aft Pond and 2.6 acres that include the Maple Swamp wetlands that drain to Otter Pond). The park area contains a wide variety of recreational

amenities including: ten tennis courts; one hardball and four softball diamonds; one full-size and five minor soccer fields; one field hockey field; a large playground area; a marked cross-country trail; and an area for senior citizens that contains shuffle board courts, bocci ball courts and horseshoe courts. This park is widely utilized throughout the year by local area residents. Additionally, local citizen organizations such as the Lion's Club and the P.B.A., and family groups utilize the park for special events.

• *Private Beach Associations*

To the immediate east of Haven's Beach, there are three private beach associations, each of which maintains limited access and a small parking area for the exclusive use of property owners and their guests. As previously noted, these properties are protected from development through deed restrictions. A description of the individual association beaches follows.

1) *Azurest Property Owners Association*: Located to the immediate east of Haven's Beach is the community of "Azurest," which is bounded on the east by Walker Avenue and the south by Route 114 and Hempstead Street. A footpath at the terminus of Terry Street provides access to the beach, and a small parking area provides a limited number of spaces for homeowners' vehicles with a valid permit. Trash receptacles are located along a steel guardrail designed to prevent vehicle access to the beach. No lifeguards are on duty and signs are posted to alert beach goers that swimming is "at your own risk."

2) *Sag Harbor Hills Improvement Association*: Immediately east of Azurest is the community of "Sag Harbor Hills," bounded on the east by Hillside Drive and the south by Route 114. At the terminus of Hillside Drive East, the Sag Harbor Hills Improvement Association maintains an unpaved footpath which leads to the beach. Trash receptacles are located along a split rail wooden fence which borders the footpath and a sign is posted in the area to alert beach goers that no lifeguard is on duty and swimming is "at your own risk." The parking area is small and limited to a few spaces for the vehicles of residents with a valid permit.

3) *Ninevah Beach Association*: The third homeowner's association in the area east of Haven's Beach is Ninevah Beach Association - located immediately east of Sag Harbor Hills and bounded on the east by a salt marsh which drains into Little Northwest Creek. A partially paved footpath and small parking area at the terminus of Harding Terrace provides homeowners and their guests access to the beach. Signs at the origin of the footpath warn beach goers that no lifeguard is on duty and swimming is "at your own risk." Trash receptacles are located in the vicinity which is otherwise undeveloped and in a natural state.

• *Breakwater Yacht Club Sailing School*

The Breakwater Yacht Club has built a community sailing school on the Village-owned waterfront property which was previously being leased by the Sag Harbor Yacht Yard (as discussed above). The sailing school facility is housed in a two-story frame structure. There

is also a floating dock for boat storage, and a ramp which extends from the bulkhead. This facility allows the Breakwater Yacht Club to expand their present program, which is open to the schools and community youth organization in the Village of Sag Harbor area. Presently, 40 percent of the scholarships awarded for this program go to Sag Harbor youth.

- *Private Marinas*

The shoreline of the local waterfront revitalization area contains a number of marinas and other marine-related facilities that service the local boating industry. These facilities, which are discussed in greater detail in the Sag Harbor Village Harbor Management Plan, include: Ship Ashore Marina, Sag Harbor Cove West Marina and Sag Harbor Cove East Marina, which are located in Outer Sag Harbor Cove; and, Waterfront Marina, the Sag Harbor Yacht Club, and the Sag Harbor Yacht Yard - located in Sag Harbor inside the breakwater.

- *Docks, Bulkheads and Boat Basins*

There are numerous private docks, bulkheads, and boat basins that adjoin residential properties throughout the local waterfront revitalization area. Most of the bulkheading is found throughout the *Harbor Water Use District*, along the shoreline of the marinas and other marine-related facilities. The Sag Harbor Cove West Marina includes a boat basin that is fully bulkheaded. The Marine Park boat basin has hardened shorelines along three sides, the western portion of this facility is unprotected. There are also a considerable number of bulkheaded properties along the shoreline of the Redwood peninsula. The Redwood peninsula also contains a private boat basin that is entirely bulkheaded. The only hardened shoreline found on the east side of the breakwater consists of a low masonry wall along the front of the Cor Maria property, and rubble revetments and wooden bulkheads along the stretch of shoreline located to the immediate east of Haven's Beach. This area includes most of the properties along Terry Drive.

The private docking structures found throughout the area are mostly small in size and generally can accommodate only one or a few boats. Some residents also install floating docks that are removed in the winter season. There are four permanent private docks located along the eastern side of Ligonee Brook; six within Morris Cove; twelve along the shoreline of Upper Sag Harbor Cove; and 19 along the perimeter of the Redwood peninsula.

Recreational Use of Fish and Wildlife

- *Consumptive Activities*

Sportfishing is popular in many areas throughout the Village and adjacent waters. Weakfish (*Cynoscion regalis*), striped bass (*Morone saxatilis*), winter flounder (*Pseudopleuronectes americanus*) and porgy (*Stenotomus chrysops*) are taken in waters of the Sag Harbor and the Sag Harbor Cove Complex. Round Pond supports several freshwater species of game that are commonly caught by local fishermen (e.g., largemouth bass, pumpkinseed and bluegill). Local citizens often harvest small quantities of shellfish (e.g., hard clams, soft clams and scallops) for their own consumption from Sag Harbor Cove. Duck hunting does not take place within Village boundaries.

- *Non-Consumptive Activities*

All of the waters around Sag Harbor Village are used for recreational boating and sightseeing. Bird watching is popular along the expanses of beach where waterfowl can be observed in the winter and nesting coastal birds can be observed throughout other parts of the year. Public use of Otter Pond consists primarily of feeding the domesticated water fowl and relaxing on the pond shore.

(g) Vessel Usage and Waterways

Navigation

Sag Harbor is protected from the east by a two-section, 3,180-foot breakwater. This structure extends in a northeasterly direction from western shoreline of the Cor Maria property and protects well over 100 acres of surface water area (see Figure 2). The construction of the breakwater was completed by the U.S. Army Corps of Engineers (ACE) in 1908. The breakwater is the primary source of protection to the Harbor from storm damage. Navigation and navigational activities within the Harbor, including the development of a federal navigation channel in 1937, have been designed and coordinated around this structure since that time. The future of the Harbor as it exists today is dependent upon the continued maintenance and repair of the breakwater.

The breakwater was constructed at an elevation of 7.5 feet above mean low water. The original natural depth of the protected area varied from three to 17 feet at mean low water. The ACE conducted modest rehabilitation of the breakwater in 1963, which involved the placement of over 1,500 tons of stone to rebuild the structure to its original elevation. Since that time, the entire breakwater has settled and needs to be repaired. In some areas the foundation is failing. Waves created by storm events break over the top of this structure, resulting in damage to shoreline structures. Rehabilitation should include the replacement of stone to increase the elevation by five to six feet, as well as the refurbishing of the foundation to improve structural integrity. The

ACE has performed a field survey, and the Village is awaiting funding for engineering rehabilitation.

Since 1963, when the ACE completed repair work on the breakwater, the ACE has had no other direct involvement in navigation projects within the harbor management area. The federal channel and anchorage areas in Sag Harbor were de authorized by the passage of the Water Resources Development Act of 1992. The breakwater is still under federal jurisdiction and any necessary future maintenance will be conducted by the ACE.

The ACE will not have any direct future involvement in maintenance dredging activities for the channel or anchorage areas. Once the channel was de authorized, it fell under the authority of the U.S. Coast Guard (USCG) since it is still an active navigation channel. The USCG is responsible for providing and maintaining channel markers, as well as the placement of these devices. At present, the USCG authorizes the placement of channel markers by the Village.

There are a number of navigational aids found within the Sag Harbor Cove/Bay Complex. Navigational aids include buoys, fixed lights, range markers, day markers, and other such devices. In the Sag Harbor area, navigational aids delineate the channels and mark obstructions in local waters, as summarized below.

In Sag Harbor Bay, leading into the harbor, there are a number of buoys. The Sag Harbor sea buoy marks the middle of the entrance channel to Sag Harbor and can be passed on either side. Immediately east of the sea buoy is a green lighted buoy which marks the main navigation channel in Sag Harbor Bay. South of this green buoy is a white buoy which marks an area of rocks that are visible above the water surface at low tide.

At the harbor entrance there is a fixed green light located at the northwestern end of the breakwater. Just west of the breakwater is the navigation channel which is delineated by three buoys; one near the channel mouth, one near the northern end of the Long Wharf, and one located inside the harbor area along the western edge of the mooring area. This navigation channel, once under the authority of the ACE, is now the responsibility of the U.S. Coast Guard. The channel buoys are authorized by the U.S. Coast Guard and set and maintained by the Village Harbormaster. Exclusionary white and orange markers are used in the vicinity of Haven's Beach, in Sag Harbor Bay, to delineate the swimming area.

The North Haven/State Route 114 bridge is a fixed structure with a 19-foot vertical clearance and 37-foot horizontal clearance. The height of this bridge is a limiting factor, restricting the types of vessels that can access the Sag Harbor Cove Complex. This bridge is marked with red lights indicating the safest points of entry into Sag Harbor Cove. These lights provide a guide into Outer Sag Harbor Cove for boaters who are entering the harbor at the northwestern end of the breakwater. The navigation channel that runs from east to west through Outer Sag Harbor Cove is delineated by nine buoys. Three of the five red buoys that mark the northern side of this channel are lighted. All of these buoys are set and maintained by the Town of Southampton.

Water hazards and obstructions within navigable waters include rocks and submerged and visible wrecks. Abandoned vessels are also hazards to navigation and removal is constrained since they are generally not registered, which makes it difficult to trace the owner in order to assign the costs of removal to the responsible party. Floating debris (e.g., timbers, logs, pilings) is often generated as a result of storms and tides, or ice damage to structures. The Towns are generally responsible for removing navigation hazards within local waters, and usually perform this task in Village waters at the Village's request. Navigation hazards also include excessively long docks, as well as shoals and bars within or in close proximity to navigation channels, particularly within the coves.

Jurisdiction

Jurisdiction with respect to over-water vessel uses within the harbor complex is divided among the Village of Sag Harbor, the Village of North Haven, and the Towns of Southampton and East Hampton. Pursuant to Chapter 46A of the State Navigation Law, the Villages of Sag Harbor and North Haven have the exclusive authority to regulate the over-water use of vessels upon the waters that lie within 1,500 feet of their respective mean high water line. This gives the Villages the capacity to control mooring and anchoring, vessel speed, the use of personal water craft, and recreational activities such as water skiing and wind surfing.

In accordance with Section 130.17 of the New York State Town Law, the Towns of Southampton and East Hampton regulate over-water vessel use upon waters within their municipal boundaries, but not within the 1,500-foot area of water surface that extends from the mean high water line adjacent to incorporated Villages. Additionally, as discussed in Section 2.3A(f)(1), the State of New York and the Town of Southampton own the underwater lands in Sag Harbor, and the Outer, Inner and Upper Coves, respectively. Therefore, they have the proprietary right to allow the use of the bottom lands in these areas.

As noted above, the coastal waters in the Sag Harbor Cove/Bay Complex are heavily utilized by both recreational and commercial water craft. Sag Harbor and Sag Harbor Bay are part of the larger Peconic Bay system and are linked via the system of navigation channels that run through these waters. The high intensity of vessel usage in the Sag Harbor area has caused conflicts and problems with respect to waterway usage (including dockage, mooring and anchorage) and navigation.

The Waterways Law (Chapter 53 of the Village Code) regulates surface water uses in the Village and applies to all waters of the Village and waters adjacent to the Village to a distance of 1,500 feet from the mean high tide line. The area covered by the Law generally coincides with the waterside boundary of the study area for this Local Waterfront Revitalization Program. The main provisions of Chapter 53 include the following:

- The dumping of oil, refuse, garbage or waste, and the discharge of toilets is prohibited.

- A Village permit is required for each vessel mooring. Mooring locations are governed by a grid established and controlled by the Harbormaster and/or Village Police.

- No boat shall be anchored or moored in such a way that it, at any time, rests within the lines of any navigation channel.

- The mooring of floats requires a Village permit and is controlled by the Harbormaster and/or Village Police.

- All boats, other than those propelled by hand, are prohibited from operating within 100 feet of lifelines and bathing floats and 200 feet from any beach regularly used for bathing.

- Maximum vessel speed is 45 miles per hour (mph), unless otherwise posted. The speed limit within harbors and other areas congested with boats is 5 mph.

- Waterskiing, windsurfing, and similar activities are prohibited within 200 feet of the shoreline and within 50 feet of any bather, except when commencing or ending a ride.

- Water scooters (e.g., jet skis) are prohibited within harbor areas and designated public bathing beaches. Such vessels are prohibited outside harbor areas to a distance of 250 feet of the shoreline or within 50 feet of any bather, except when commencing or ending a ride at a speed no greater than 10 mph.

- Skin diving, scuba, swimming, and related activities are prohibited within any channel.

Dredging

Channel maintenance is essential to provide safe navigation for recreational boating traffic while conserving the natural coastal resources. Sag Harbor Cove and other portions of the Sag Harbor coastal waters have been dredged over the years to develop navigational channels and boat basins. The last such dredging was in the 1960s. It disturbed much of the marshy edge and, along with other activities, resulted in the filling of many areas of tidal wetlands. The dredging of public channels, public boat basins and mooring areas in the Sag Harbor Cove/Harbor Complex has been performed in the past by the Army Corps of Engineers (ACE) and the Suffolk County Department of Public Works (SCDPW).

Sag Harbor is protected from the east by a two-section, 3,180-foot breakwater. This structure extends in a northeasterly direction from western shoreline of the Cor Maria property and protects well over 100 acres of surface water area. The construction of the breakwater was completed by the ACE in 1908. Navigation and navigational activities have been designed and coordinated around this structure since that time. In 1937, the ACE completed the dredging of a navigational channel 10 feet deep, 100 feet wide and 0.4 miles long, extending into Sag Harbor from about 450 feet northwest of the breakwater. The channel terminated in a turning basin, a

channel extension towards Conklin Point, and two adjacent anchorage areas. The northeastern anchorage area was dredged to a depth of 8 feet, and the southern anchorage area was dredged to 6 feet deep. The federal navigation channels, mooring areas, and turning basin are depicted in Figure 2.

The Village of Sag Harbor operates a large mooring area which is located between the navigation channel and the breakwater. There is another, smaller, mooring area situated on the western side of the Long Wharf. Combined, these areas can accommodate up to 150 vessels, although the number varies depending vessel size. There are generally 130 usable moorings locations at all times. According to the Village Harbormaster, several areas inside the breakwater have experienced shoaling and cannot accommodate boats with a draft deeper than four feet. Shoaling has occurred along the west side of the Long Wharf and the western side of the breakwater. These shallow conditions make these areas inaccessible to vessels that would otherwise lease the available mooring locations, thereby denying the Village of this potential source of income. Dredging in both areas would eliminate this problem.

Although federal dredging within the anchorage areas may alleviate some of the shoaling problems, the waters west of the Long Wharf lie outside the navigation channel and are not likely to be affected by any future ACE involvements. In order to have the federal channel and anchorage areas reauthorized, for dredging an official request must be filed with the New York District ACE Planning Division through the local Congressional Office. Once the request is received, the ACE must review the waterway uses and conduct an economic feasibility study. If the ACE deems the project to be favorable, the proposal will be appended to a major bill introduced before Congress. According to the ACE Navigation Branch, the process will take a minimum of two to three years before the action is approved (Lew, ACE Navigation Branch, February 17, 1995; Beverly, January 17, 1995; Congressional Record, October 5, 1992).

In 1960, the SCDPW constructed a navigational channel through Outer Sag Harbor Cove that measured 100 feet wide and approximately seven feet below mean low water (MLW), which extended from approximately 400 feet west of the North Haven/State Route 114 bridge (and approximately 100 feet west of an underwater telephone cable) westerly through the Big Narrows. Just past the Big Narrows, the channel was widened to 150 feet wide and approximately six feet below MLW, extending into (Staff) Paynes Creek. In 1965, the channel was extended south through Inner Sag Harbor Cove, the Little Narrows and Upper Sag Harbor Cove, and included the mouth of the Otter Pond tributary. The SCDPW has not conducted any maintenance dredging in the main channel and Upper Sag Harbor Cove areas since these channels were first dredged. In 1977, the SCDPW dredged the nearshore portion of Sag Harbor in the vicinity of the Village Marine Park facility. The area containing the A and B Docks in Outer Sag Harbor Cove was dredged in 1978. Private maintenance dredging was performed at Baron's Cove Marina in 1994. The SCDPW has not received any recent requests from the Village through the Towns of East Hampton and Southampton for further dredging, and hence, are not aware of any localized shoaling conditions or need for future dredging.

The SCDPW plans to construct a southerly spur off the main channel in Outer Sag Harbor Cove, to service the mouth of the Redwood boat basin, in the vicinity of the Ship Ashore Marina. SCDPW has filed permit applications with the NYSDEC and ACE in 1990, but has not yet received approval. One problem facing this proposed project is the identification of a suitable dredge spoil disposal area. The owner of the boat basin has shown preliminary interest in accepting the SCDPW dredged material for de watering on-site. However, the sediments may be of a type which would limit future use (small-grained, organic and/or contaminated) and no final decision has been made (Hunter, February 16, 1995; SCDPW File Search, 1994).

Dredge Spoil Disposal

The dredged channels and the areas where dredged material was historically placed by SCDPW are depicted on Figure 11 in the Village Harbor Management Plan. Dredge material taken from the Sag Harbor Cove main channel was placed on the beachfront north of Long Beach Road and upland in the vicinity of the Ship Ashore Marina, where a condominium complex is now located. Dredge material from the westerly extension of the main channel and from Paynes Creek was placed on the south side of Long Beach Road as well as in upland areas of the Ship Ashore Marina and on adjacent parcels located further south. Dredge material from the Village docks, was also placed in upland disposal locations in the vicinity of Ship Ashore Marina. Dredged material taken from the Village Marine Park facility was spread on upland areas at Haven's Beach. With the exception of the Sag Harbor (Redwood Cove) spur, all of the permits for SCDPW projects have expired. In order to facilitate future SCDPW dredging actions the Towns of East Hampton and Southampton must apply for new permits. Approval of new dredging actions in this area will require: the identification of new dredge material disposal areas; grain size and chemical constituent analyses; and easements from property owners.

The administrative process for initiating County-sponsored dredging in local waters is a lengthy one, coupled with the usual time constraints involved with securing the necessary State and federal permit approvals. Once the SCDPW receives a request for dredging, the request must be reviewed to determine the public need and receive approval from the Dredge Screening Committee (consisting of the Commissioner of SCDPW, several legislators, the Suffolk County Council on Environmental Quality and the Suffolk County Executive). Once approved by the Dredge Screening Committee, site specific information must be gathered (including a site survey, estimation of quantities and particular dredging requirements) and permit applications filed. In the past, SCDPW dredging projects were funded through appropriations from the County Capital Program. However, the dredging funds were deleted from the 1995 Capital Budget, which implies that no new dredging will be funded by Suffolk County from 1995 through 1997 (Rogers, February 14, 1995).

In light of these facts, the Towns and Village of Sag Harbor must assess their dredging needs and devise a means of addressing this issue. The Village should prepare a dredging plan that identifies navigation channels that should be maintained for public use, with specific dimensional information included. Dredging actions should be associated with water-dependent

uses or marina uses in the WF Waterfront and MA Marine Zoning Districts and provide public access. Dredge spoil disposal options must also be identified, whether appropriate upland sites are utilized or spoil materials are carted away.

It is also important to note that the NYSDEC is presently taking a "hard look" approach at all "new" dredging projects. "New" dredging projects are defined as those areas that have not been dredged within the past 20 years, whether or not initial or maintenance dredging was conducted in the past. "New" projects are not likely to receive approval from the NYSDEC unless an overwhelming public need can be demonstrated, and the issues of contaminated sediments and the current lack of local disposal locations for such materials are adequately addressed (Hunter, February 16, 1995; Rogers, February 14, 1995).

B. WATER RESOURCES

(a) Surface Water Resources

The estuarine nature of Sag Harbor's coastal embayment waters is dependent upon the maintenance of sufficient tidal flow and freshwater inflow from upland watershed areas. Sag Harbor Cove and the coastal waters of Sag Harbor receive considerable freshwater input from two major watersheds: (1) the morainal and outwash areas between the Bridgehampton Racetrack and the Long Pond chain-of-ponds system in Southampton Town to the south and west, and (2) the area roughly coincident with what is called "Northwest" in East Hampton Town to the east.

The quality and volume of the waters emanating from these two great recharge systems is directly reflected in the quality and productivity of Sag Harbor Cove, Sag Harbor Bay and Northwest Harbor. As a result, these watershed areas should receive the utmost protection in terms of limiting zoning density and other safeguard measures (e.g., turf control and limitations on the volume and nature of wastewater effluent recharged). A cooperative effort with the Towns of Southampton and East Hampton would be beneficial.

- *Sag Harbor Bay*

Sag Harbor Bay is a shallow embayment with a tidal range of three feet. It is adjunct to Northwest Harbor and Shelter Island Sound. Sag Harbor Bay is open year-round to shellfish harvesting. The underwater lands in Sag Harbor Bay are owned by New York State. Sag Harbor Bay is bordered to the south by the Cor Maria facility, the Haven's Beach Village Park, and a long stretch of private beach. Sag Harbor Bay is included in the *Low Intensity Water Use District (LID).*

- *Sag Harbor*

Sag Harbor is a semi-enclosed area situated at the entrance to the Sag Harbor Cove Complex. Sag Harbor is protected from the open bay by an elongated stone breakwater and is connected to Sag Harbor Cove by a tidal strait which is spanned by the North Haven/State Route 114 bridge. The area experiences incomplete tidal flushing twice daily by strong tidal currents. The average tidal range is three feet. Water quality is seasonally-affected by boat traffic and docking and marina facilities. The priority water quality impairment problem for this water body is shellfishing, caused by pathogens from storm sewers, municipal point sources, and boating pollution.

The shoreline of Sag Harbor Bay - between the Long Wharf and the breakwater - is largely hardened with bulkheading. The presence of four marinas (Waterfront Marina, Village Marine Park and Boat Basin, Sag Harbor Yacht Club, and Sag Harbor Yacht Yard) account for approximately 235 boat slips. There are also two mooring areas that contain approximately 150 mooring locations (20 of them are currently accessible to only shallow-draft vessels) within the Sag Harbor area. Sag Harbor is included within the *Harbor Water Use District (HD)*.

- *Sag Harbor Cove Complex*

The Sag Harbor Cove Complex is comprised of a series of four water bodies: Outer Sag Harbor Cove, Inner Sag Harbor Cove, Upper Sag Harbor Cove and Morris Cove. Each of the basins is connected by a narrow navigation channel; a strait from the northern end of Outer Sag Harbor Cove connects these waters to Sag Harbor. The overall surface area of the Sag Harbor Cove Complex, including Sag Harbor Coves and Upper Sag Harbor Cove, is 0.7 square miles; the average depth is 4.9 feet. The underwater lands in the cove complex are owned by the Town of Southampton.

Average tidal range in the Sag Harbor Cove Complex is approximately two feet; the average spring tide range is closer to three feet. A limited salinity study conducted in 1991 indicated that the entire cove complex was "nearly well-mixed" and is influenced strongly by coastal salinities. There was a slight longitudinal salinity gradient, with salinity decreasing mildly in an upstream direction (Najarian Associates and Cornell Cooperative Extension, 1992).

The watershed for the Sag Harbor Cove Complex covers approximately seven square miles and is dominated by residential land use and excessively-drained soils. The northern and southern portions of Outer Sag Harbor Cove are differentiated by which side of the Big Narrows the waters lie. A similar situation exists where the Little Narrows separates Inner Sag Harbor Cove from Upper Sag Harbor Cove. As with Sag Harbor, the priority water problem impairment for this water body is shellfishing, caused by pathogens from storm sewers, municipal point sources, and boating pollution.

Surface water quality in the Sag Harbor Cove Complex is dependent on adequate tidal flushing and stream flow. The principal means for flushing in Upper Sag Harbor Cove is the channel that runs between the Inner and Upper Coves and Outer Sag Harbor Cove, known as the Big Narrows. Within the cove complex, other channels provide daily flushing of the extended cove segments. These channels must be maintained in good condition for this function.

A hydraulics study was conducted in 1991 and showed that the Sag Harbor system is a "hydraulically efficient" embayment having a relatively large ratio of entrance conveyance area to basin surface area. That is, due to its small size and deep entrance, the Sag Harbor system already has interior tidal ranges which approximate the ranges at its entrance. Because the entrance channel already conveys sufficient flow to permit efficient filling and emptying of this embayment over a tidal period (12.42 hours), enlargement of the entrance to Sag Harbor Cove would not effectively increase Sag Harbor tides, and thus would not increase their overall flushing capacity. The average flushing time of Sag Harbor is approximately 7.7 days. There remains some question as to whether Sag Harbor Cove flushes efficiently, inside the Big Narrows.

The shoreline of Outer Sag Harbor Cove is largely hardened. The four marinas that are located on these waters (Sag Harbor Cove East Marina, Village **A** and **B** Docks, Sag Harbor Cove West Marina, and Ship Ashore Marina) have a combined total of approximately 385 boat slips. Outer Sag Harbor Cove is included in the *Harbor Water Use District (HD)*. Inner Sag Harbor Cove, Upper Sag Harbor Cove and Morris Cove are included in the *Conservation Water Use District (CD)*.

- *Ligonee Brook*

Ligonee Brook is a small freshwater brook running from east to west, draining into the southeastern end of Inner Sag Harbor Cove. The Sag Harbor Village boundary follows the center of Ligonee Brook, spanning the entire length of this water body. West of Brick Kiln Road, in the lower reach of the Brook, there is some salt water influence. East of the road, in the upper reaches, there is little salt influence except during extreme storm surges. The shoreline of Ligonee Brook is relatively free of structural hardening. Ligonee Brook is included in the *Conservation Water Use District (CD)*.

There are many freshwater elements in the LWRP area. The several ponds, drainage kettles, wetlands, that together with Ligonee Brook, form an interesting system of freshwater elements that are valuable in terms of wildlife habitat known to support a number of rare, threatened, and endangered species.

- *Otter Pond*

Otter Pond is a shallow intertidal pond of approximately four acres that is located within Mashashimuet Park, which is owned by the Sage Foundation.

Otter Pond receives saltwater from a tidal creek originating in Upper Sag Harbor Cove, which flows through a culvert under Main Street. Due to restrictions caused by stones and debris at the pond's connection to the creek, tidal fluctuation for the pond is approximately one foot while the tidal amplitude in Upper Sag Harbor Cove is approximately 1.7 feet. Freshwater enters the eastern end of the pond from a large red maple swamp located across Jermain Street, between Joel's Lane and Archibald Way.

The once healthy wetland pond has had most of its protective fringe replanted. The area to the east provides filtration and stabilization for the pond. The pond's flushing capacity is dependent upon maintaining the tidal creek connection to Upper Sag Harbor Cove, and upon the input of sufficient amounts of freshwater from upland underflow, stream flow and surface runoff. The shoreline of Otter Pond is free of structural fortification. For the purposes of identifying surface water uses, Otter Pond meets the defining characteristics of the *Conservation Water Use District (CD)*.

Otter Pond is used primarily for strolling and fishing. People also feed waterfowl along the pond's edge. Fishermen catch occasional striped bass and white perch, among other species. Each year it supports a wintering flock of waterfowl of about 100 birds, mostly mallards and canvasbacks. In addition, the pond supports a number of resident domestic geese and ducks. It has a potential for eutrophication, especially where its slopes are fertilized and its upstream freshwater sources from the Long Pond morainal watershed system are encroached upon.

- *Round Pond*

Round Pond is a freshwater pond, with some development having occurred around the perimeter. Only the northern portion of Round Pond is located within, and owned by, the Village at the southern end of Joel's Lane; (the southern portion is located in the Town of Southampton and owned by the Town). The shoreline of Round Pond is free of structural fortification. Round Pond is included in the *Conservation Water Use District (CD)*.

- *Little Northwest Creek*

Little Northwest Creek is a small tributary that feeds into Sag Harbor Bay and forms the eastern border of the Village. This tidally-influenced portion of the creek is surrounded by approximately 190 acres of State-owned tidal wetlands and buffering upland that is managed by the NYSDEC. The shoreline of Little Northwest Creek is free of structural fortification. Little Northwest Creek is included in the *Conservation Water Use District (CD)*.

Little Northwest Creek is an important component of the Peconic Bays ecosystem, contributing to the biological productivity of the area. The Sag Harbor and Northwest Harbor Significant Coastal Fish and Wildlife Habitat includes the tidal wetlands associated with Little Northwest Creek.

(b) Surface Water Quality Classifications

Pursuant to Title 6, Chapter 10 of the Codes, Rules and Regulations of New York State (NYCRR) discharge standards and water quality classifications have been assigned by the NYSDEC to the surface waters in the State according to their best usage. These classifications set discharge standards and are not necessarily indicative of existing water quality conditions. General water quality classifications are summarized in terms of their best usage, as presented in Table 1. The general water quality classifications assigned to each water body in Sag Harbor Village waters are shown on Figure 5 and summarized in Table 2.

The quality of marine and estuarine waters can be assessed on the basis of a variety of variables, including color, odor, floating and suspended solids, oil, toxic compounds, and other deleterious substances. Water quality classifications in New York State are currently based primarily on three indices: total coliform level, fecal coliform level, and dissolved oxygen concentration. Existing water quality conditions are discussed below in subsection (c).

In order to be certified as a shellfish harvesting area, the median total coliform level for any series of samples must be 70 MPN/100 ml or less (where MPN/100 ml is the most probable number of organisms per 100 milliliters of sample). New York State (2 NYCRR Part 701.20) classifies these certified shellfishing waters as *SA*, which designates the highest level of water quality. A *SB* classification is assigned where the monthly median total coliform level is 70 to 2400 MPN/100 ml, where no more than 20 percent of the samples exceed 5000 MPN/100 ml, and where the monthly geometric mean value is 200 MPN/100 ml or less. The best intended use for *SB* waters is swimming.

Priority Water Problem (PWP) waters are surface waters which either cannot be fully used as a resource (i.e., are not achieving best usage), or have problems which can damage their environmental integrity. PWP waters are listed in the following four categories:

- **Use Precluded** -- A classified best usage of water is not possible, e.g., swimming is banned by health regulations.

- **Use Impaired** -- A classified best usage of water is limited, e.g., fishing is possible, but consumption is restricted.

- **Stressed** -- Water quality is reduced and a classified best usage of water is marginally restricted. A water quality problem is evident, but impairment is not clearly demonstrated.

- **Threatened** -- Conditions are such that a classified best usage of water may become limited. Changes in land use or pollutant sources may result in water quality problems.

The NYSDEC identified, in the Department's 1996 Priority Water Problems List, "Sag Harbor and Coves" by water quality classification and limitations or environmental problems. Carrying

a water quality classification of *SA* and affecting an area of two hundred-eight acres, Sag Harbor and Coves have a precluded use. Shellfishing is precluded due primarily to pathogens which come from storm sewers, municipal point sources, and boating pollution. Shellfishing areas in the waters of Sag Harbor Bay, to the west of the breakwater, are closed year round. Shellfishing areas in Sag Harbor Cove are closed on a seasonal basis (May 15 - Oct. 31). "Sag Harbor and Coves" was included as a priority in the NYSDEC Nonpoint Source Management Program (January 1990).

(c) Existing Water Quality Conditions

The primary objective of most ongoing water quality monitoring programs in New York State is to prevent human health impacts from exposure to pathogenic bacteria and viruses (e.g., the hepatitis and Norwalk viruses, and the Salmonella bacteria), which can result from either direct contact with contaminated water or the consumption of tainted shellfish. However, the detection of these pathogens is generally a time consuming and tedious undertaking. Consequently, water quality testing typically entails the use of coliform bacteria, which are relatively easy to measure; these bacteria cooccur with the pathogens of primary concern and serve as indicators of the possible presence of those pathogens.

Fecal coliform bacteria present in stormwater originate in the intestinal tracts of warm-blooded animals and can be derived from wildlife, domestic animals, or humans. Coliforms of human origin in stormwater are typically caused by malfunctioning on-site sewage disposal systems, although illegal wastewater connections to stormwater pipes can also be a problem in certain areas. Sewage treatment plant outfalls and discharges from boats also deliver human sanitary wastes or treated effluent, and associated coliform loads, to the waters of the Sag Harbor Cove/Bay Complex.

Wildlife can also be a major source of coliform bacteria to coastal waters, especially in settings such as Sag Harbor Bay and the Sag Harbor Cove Complex, which have a rich native fauna. Fecal wastes from wildlife present in upland areas can be carried to surface waters in stormwater flow. Upland habitat areas adjacent to the shoreline can be a significant source of coliforms, due to the short distance runoff has to travel before reaching the receiving waters. The direct discharge of fecal wastes from waterfowl within a water body can also be important.

Otter Pond supports large numbers of waterfowl throughout the year, especially during the winter months. During the 1994 winter waterfowl survey, nearly 200 ducks were observed on Otter Pond in one day. Waterfowl feeding is also a popular activity at Otter Pond. This concentration of waterfowl, whether a natural or man-induced occurrence, contributes significantly to the degradation of water quality.

Domestic animals also generate fecal wastes that can be delivered to coastal waters. The magnitude of the coliform input from this source is dependent upon the number of pets and livestock in a given watershed area, as well as the drainage characteristics of the watershed.

Although no quantitative analysis has been performed for the study area, the contribution of coliforms from wildlife is believed to significantly exceed the input from domestic animals, particularly when direct inputs from waterfowl are taken into consideration.

Although native wildlife communities would contribute coliforms to a coastal water body even if the watershed remain undeveloped, development invariably increases the bacterial loading versus the undeveloped condition. The presence of domestic animals makes some contribution to this increased pollution level; however, the most important factor is the alteration of stormwater drainage characteristics within the watershed. More specifically, development results in the replacement of permeable natural land surfaces (e.g., woodlands and meadows) with impervious surfaces (e.g., paved roadways, walkways, and building roofs). Even in areas cleared for development that are subsequently replaced with landscaping, the planted vegetation generally has a lower capacity for absorbing rainwater than the original vegetation; this is especially true with respect to turf areas. The overall consequence of these conditions is that development generally increases the amount of runoff generated on a given parcel of land. The augmented volume of runoff from developed properties results in an increase in the amount of coliform bacteria carried from the land surface to receiving waters.

Surface water quality data are collected and analyzed by the NYSDEC on a routine basis in shellfish growing areas, including the estuarine waters in and around the Village. A total of 17 sampling stations have been established by the NYSDEC throughout the Sag Harbor Cove/Bay Complex, including 16 stations west of the breakwater and one station to the immediate east of the breakwater. These waters have been designated by the NYSDEC as shellfish growing area No.19.

The water quality data collected by the NYSDEC, which consist of total and fecal coliform bacteria measurements, are used to determine the certification status of shellfish beds in accordance with the provisions of the National Shellfish Sanitation Program. Bacterial water quality at any given station is considered to be acceptable with respect to shellfish harvesting for direct human consumption if either of the following two conditions apply: (a) the median total coliform level is 70 MPN/100 ml or less and no more than percent of the samples exceed a total coliform level of 330 MPN/100 ml; **or** (b) the median fecal coliform level is 14 MPN/100 ml or less and no more than 10 percent of the samples exceed a fecal coliform level of 49 MPN/100 ml. The units MPN/100 ml are the most probable number of organisms per 100 milliliters of water sample, as determined by standard laboratory protocol.

Shellfish harvesting is restricted in portions of the Village waters, as depicted in Figure 5, due to actual or potential water quality deterioration. Based on the NYSDEC's review of coliform data collected during the five-year period between 1986 and 1991, as summarized in a report prepared September 22, 1991, 155 acres of underwater lands situated between the North Haven/State Route 114 bridge and the breakwater are presently classified as uncertified year-round. These waters include the Village anchorage area and the buffer zone of closure around the sewage treatment plant outfall. The single sampling station located in close proximity to the

STP outfall has consistently failed to meet the shellfish harvesting standards for both total and fecal coliform levels, under dry weather conditions as well as during significant rainfall events during the 1986 through 1991 sampling period.

Seasonal closures covering two separate areas totaling 28 acres are presently in effect in the Village area. These seasonally certified areas include underwater lands to the immediate west of the North Haven/State Route 114 bridge (which contains the Village A and B docks, Sag Harbor Cove West Marina, and Sag Harbor Cove East Marina) and the cove on the north side of the Redwood peninsula (known as the Redwood boat basin) in which the Ship Ashore Marina is situated. Both of these areas of seasonal closure are in effect as a precautionary measure due to potential contamination derived from vessel waste discharges. Shellfish harvesting can only occur in these waters between November 1 and May 14, when vessel activity is minimal. The seasonal restrictions assigned to these areas by the NYSDEC were based primarily on historic records of reduced water quality during the warmer months of the year.

A station in the southeastern corner of Upper Sag Harbor Cove, between Bluff Point and the outlet of Otter Pond, consistently failed to meet the standards for total and fecal coliform bacteria under both dry weather and wet weather conditions during the NYSDEC's 1986 to 1991 analysis period. On the basis of those data, the NYSDEC subsequently classified the affected area as closed to shellfish harvesting on a year-round basis. The causes of deteriorated water quality in this area are not fully clear, according to the NYSDEC. However, it is suspected that the discharge from Otter Pond is a significant source of coliform bacteria. As noted above, Otter Pond is known to support a large waterfowl population, which is a significant contributor of fecal matter. In addition, this portion of the shoreline is closely surrounded by older residences, which may be adding to pollution conditions via inadequately treated septic wastes. Poor mixing at the eastern end of Upper Sag Harbor Cove also may be a factor in elevated coliform levels. It should be noted that all NYSDEC shellfish harvesting restrictions, as discussed above, are based on 1995 conditions and are subject to change on an annual basis.

During the NYSDEC's 1986 to 1991 analysis period, all of the sampling stations located in Upper Sag Harbor Cove failed to meet the fecal coliform standard during wet weather conditions. However, except for the aforementioned single station in the southeastern corner of the cove, all of these stations were in compliance with the total coliform standard during wet weather conditions. As noted previously, bacterial water quality is considered to be unacceptable for shellfish harvesting only when both the total and fecal coliform criteria are contravened. Consequently, only the southeastern corner of the cove has been incorporated into the area of year-round closure. The remaining portions of the cove are designated for continued certification, except during emergency conditions such as extraordinary rainfall events.

During the period between October 1991 and July 1994 (i.e., subsequent to the preparation of the September 22, 1991 water quality report), the NYSDEC measured coliform levels during 14 separate sampling events. Although these data have not yet been incorporated into a new water quality report by the NYSDEC, a preliminary analysis was undertaken by Cashin Associates for

the purposes of the LWRP. The findings of that preliminary analysis indicate that coliform levels at four stations have contravened shellfish harvesting standards during the supplemental sampling period. These include the two stations located within the current, year-round uncertified areas adjacent to the STP outfall and at the head of Paynes Creek. The station in the southeastern corner of Upper Sag Harbor Cove, which defines an area that was closed year-round to shellfish harvesting on the basis of the NYSDEC's 1991 report, continues to contravene the shellfish harvesting standard according to the 1991 through 1994 data.

The NYSDEC's supplemental data indicate that the station located immediately east of the breakwater also contravened the shellfish harvesting standard for the sampling period between October 1991 and July 1994. However, this station was in compliance with the fecal coliform standard (and, therefore, is in compliance with the overall shellfish harvesting criteria) for the entire monitoring period, which comprises 44 separate sampling events between June 1986 and July 1994. This situation warrants continued close monitoring in the coming years, and may indicate that water quality mitigation measures are needed to prevent possible further closure of currently certified shellfish beds located east of the breakwater in Sag Harbor Bay.

The NYSDEC also conducts periodic shoreline and pollution source surveys as part of its duties under the National Shellfish Sanitation Program. The most recent survey was conducted between April and July 1988. Since development conditions have not changed substantially during the intervening seven-year period, the findings and conclusions of that report are still generally applicable today.

The 1988 pollution source survey indicated that water quality in shellfish growing area No. 19 may be adversely affected by septic effluent from residential dwellings, particularly those houses that are situated in close proximity to the shoreline. However, no evidence of actual system malfunctions was observed. It should be noted that the NYSDEC's study area includes some neighborhoods that lie outside Village waters (e.g., along Paynes Creek and the south shore of Ligonee Brook, and the southern portion of the North Haven peninsula).

Other pollution sources noted in the NYSDEC's report include the STP outfall, stormwater drains, road ends and boat launching ramps, and freshwater inputs from Ligonee Brook, Otter Pond, and other small streams and ponds. The six marinas surveyed at that time were all found to be located within year-round or seasonally uncertified areas. Waterfowl were observed throughout the area, particularly in Otter Pond.

(d) Groundwater

All of the public water supply for Sag Harbor Village is drawn from the upper glacial aquifer. The Suffolk County Water Authority (SCWA) supplies the entire Village with potable water supplies. Water is currently drawn from three wells at the SCWA well field located on Division Street, opposite Middle Line Highway. According to SCWA engineers, one older well was recently retired due to turbidity problems. Due to this fact, the SCWA can only marginally meet

demands during peak use periods in the summer. However, water restrictions are not required to meet the demand. A new well field was constructed further inland, off Sag Harbor Turnpike. This new well field supplies the Division Street well field and was put in service during the summer of 1996.

Groundwater resources become contaminated when water percolating through the soil carries pollutants downward through the soil and to the water table. Eventually, groundwater resurfaces, producing springs or ultimately discharges to streams, wetlands, or other surface waters. This under flow of groundwater also moves upward through the bottom lands of the surface water bodies. Percolation of groundwater through the sediment bed of the underwater lands will force any contaminants resting therein toward the water's surface. Groundwater underflow can contain sanitary system effluent, fertilizer leachate, and other contaminants.

In the Village of Sag Harbor, there are a number of toxic spill sites that have the potential to contaminate local groundwater resources and marine waters. These spill sites are described as follows:

- ***Rowe Industries, Inc.***

The Suffolk County Department of Health Services found contaminated wells in a small residential area along the Village's southern boundary at Ligonee Brook. A significant groundwater plume of organic contamination is flowing northwest towards, and has reached, its discharge boundary at Sag Harbor Cove. The plume, which is approximately 600 feet wide, 3000 feet long, and about 80 feet deep at its maximum depth, is entering the Cove along the shoreline to the west of the mouth of Ligonee Brook. The source of the contaminant has been determined to be an industrial plant located on the east side of the Sag Harbor-Bridgehampton Turnpike, between Carroll Street and Lily Pond Drive. The plume originated with a former industrial tenant, Rowe Industries, Inc., an electric motor manufacturing firm that used solvents for de-greasing.

The immediate action taken to provide the affected residents with an adequate and safe water supply was to extend the Suffolk County Water Authority's distribution system, and to install individual hookups to the mains. This work was completed in 1985. The Rowe site was listed on the Environmental Protection Agency's (EPA) National Priorities List in July 1987. In addition, the NYSDEC has placed this site on the list of Inactive Hazardous Waste Disposal Sites in New York State, and has assigned the site code number 152106 to this parcel. In 1988, a Consent Order was signed between the EPA and the present and former site owners to conduct a Remedial Investigation/Feasibility Study to evaluate the exact nature and extent of the contaminants present and to assess the resulting impacts on public health and the environment. The study determined that quantities of volatile organic compounds (VOCs, specifically: 1,1,1-trichloroethane, 1,1,2-trichloroethylene, tetrachloroethylene, and 1,1-dichloroethylene) were present in soils and the groundwater in high enough quantities to justify performing a remedial action. A preferred alternative was

selected after public comment, and in September 1992 a *Record of Decision* was issued to begin the remedial design and implement the proposed remedial action at the site.

The Remedial Action for the Rowe Industries Superfund site will remove VOCs from the groundwater by pumping it through a series of extraction wells, both on-site and in the surrounding area, which tap into the contaminant plume. The contaminated groundwater will be conveyed from the extraction wells by underground piping to air-stripping equipment located on the site. The on-site air stripper facility will be operated in accordance with the operations and maintenance plan to avoid any spills or clean them up should they occur. The treated groundwater will be discharged to Sag Harbor Cove via a pipe fitted with a diffuser at the outlet end. The diffuser will extend into the cove and be placed on the sediment surface. Treated water shall meet all applicable State water quality standards.

Soil excavation will also take place on the site to remove soil high in VOCs. Soils excavated from the contaminated portions of the site will be temporarily kept on-site within a designated area known as the "hot" zone. Berms, hay bales, and plastic liners will be used in this zone, as necessary, to prevent runoff into adjacent areas. The contaminated soil will then be sealed into hazardous waste drums, and transported to an EPA-registered RCRA facility using a vehicle specifically designed for such purpose. The vehicle will use roads that allow the transport of hazardous substances, along the designated transportation route. Established RCRA and U.S. Department of Transportation requirements will be complied with during the transportation of the drums to the RCRA facility.

According to the NYSDEC and USEPA, the responsible party (Nabisco Brands, Inc.) is currently working on the Remedial Design Report, design details and specifications for the extraction wells and air stripper. The removal of contaminated soils from the site was expected to begin in 1995, along with a soil gas survey to detect any contaminated vapors in the basements of surrounding homes (Wood, EPA, February 28, 1995; Bologna, NYSDEC, February 28, 1995). However, the contaminated soils were not removed according to that projection; such removal may occur in 1998.

Throughout the duration of the remedial action, surface and groundwater conditions will be monitored to ensure that pumping and discharge activities do not cause significant adverse effects to nearby surface water bodies and wetlands. Baseline studies will be conducted prior to the commencement of the remedial action. During remediation, monitoring of the condition of surface water, groundwater and the ambient air will be conducted to ensure that the project is protective of human health and the environment. Once the clean up action levels are achieved, the air strippers, diffuser, and above ground features of the project will be removed and the ground surface and bay bottom will be returned to conditions similar to that which existed prior to the remedial action (NYSDEC, 1993).

- ***Bulova Watchcase Factory***

The former Bulova Watchcase Factory Building is located on Washington Street. This NYSDEC - designated hazardous waste site (site code #152139) covers an area of approximately 2.3 acres. It was originally a textile plant that was converted to a watch manufacturer at the turn of the century. Watch manufacturing operations at the site included: tooling, pressing, forming, machining, soldering, polishing, solvent cleaning, and plating. The chlorinated solvents, 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) which were used in intermediate cleaning operations have been detected in down gradient wells and in the unsaturated soils in the facility's courtyard. A soil gas survey has indicated that the courtyard is one source of contamination.

An air sparging/soil vent system was installed in 1994 to remove the volatile contaminants (TCA and TCE) from soils and groundwater on site. It's expected to take as many as five years to complete the clean up on-site.

A plume of organic compounds consisting primarily of 1,1,1-TCA and TCE is flowing towards Sag Harbor Cove in a northwesterly direction. Eventual discharge to the cove is likely to occur based upon the direction that the contamination plume is traveling. The NYSDEC is currently negotiating with Bulova to undertake a Remedial Investigation/Feasibility Study (RIFS) to define the zone of contamination off-site. According to the NYSDEC, there may be homes located within or down gradient of a suspect plume of contaminated groundwater which are not connected to the municipal water supply or which still operate private wells. The NYSDEC will be coordinating all clean up activities for the off-site plume with the New York State Department of Health and SCDHS, and may commence a private well survey in 1995 (NYSDEC, 1993; Miller, February 28, 1995).

- ***Sag Harbor-Bridge Street***

The Sag Harbor-Bridge Street (SHBS) site encompasses approximately four acres and includes the Long Island Fisherman (LIF) property, a Long Island Lighting Company (LILCO) gas storage facility, the Harbor Close Condominium complex, the Suffolk Electric Motor property and six adjoining private residences. In 1987, Suffolk County Water Authority employees reported skin irritation while excavating soil for a pipeline on Bridge Street opposite the LIF property. However, the affected individuals did not file any formal documented complaints. The properties included within this study area were investigated by the Village of Sag Harbor, EPA, SCDHS and NYSDEC; only the LIF property was placed on the New York State Registry of Inactive Hazardous Waste Sites (NYSDEC site code #152126).

The LIF property was formerly used for industrial and commercial purposes, including flexible magnet manufacturing and newspaper publishing during 1967 through 1988. A coal

gasification plant was operated on the LILCO property between 1859 and 1929. The plant included two gas storage tanks, two purifying houses, a crude oil tank, and several other production buildings. LILCO subsequently converted the property to a gas storage and distribution facility. No other properties within the SHBS site have been associated with industrial uses.

The environmental investigations conducted since the site was listed by the NYSDEC include the installation of six groundwater monitoring wells (three wells just east of Bridge Street and three wells surrounding an oil tank on the LIF property) and over 90 soil samples. Included among the soil contaminants found were volatile organic compounds, petroleum hydrocarbons, DDT, DDE and several metals. Contaminants found in the groundwater include: volatiles, basel neutrals, acid extractables, petroleum hydrocarbons and lead.

Through exhaustive sampling and monitoring, the NYSDEC's Division of Hazardous Site Control has concluded that the site contains contaminants. However, the level of soil contamination is low and reflective of background concentrations which are typical for highly urbanized areas. It remains questionable whether the volatiles detected in the monitoring wells are suspected to have originated at the Bulova Watchcase Factory, or from prior on-site activities.

It was initially found that the contamination found on the Sag Harbor-Bridge Street site met the NYSDEC criteria for hazardous waste. Then, after the results of a 60-day public notification period, during which time no significant controversy was voiced by the public, the NYSDEC delisted this site (Whitfield, NYSDEC, September 6, 1995). The site has, however, recently been placed back on the list.

- ***Mobil Oil Corporation Property***

The Mobil Oil Corporation property consists of two parcels which front on Bay Street. The parcel located on the north side of Bay Street was acquired by the Village in 1994. The property located on the south side of Bay Street is privately owned.

Three fuel oil storage tanks and three gas tanks originally occupied the northernmost 1.3 acre parcel located north of Bay Street at the intersection with Burke Street. The tanks were removed in the late 1980's. Subsequent to the tank removals, a petroleum spill (NYSDEC Spill No. 86-7632) was discovered by LILCO on March 16, 1987 during cable excavation work conducted along the southern property boundary. Groundwater monitoring wells were installed on-site and along Bay Street in 1987 and 1988. Petroleum hydrocarbons were identified in the groundwater monitoring wells on the southeastern portion of the property and a smaller area of contaminated soil was identified near the northern property boundary in 1989. Mobil Oil Corporation installed a groundwater remediation system which processed extracted groundwater through a carbon absorption method and discharged treated water into Sag Harbor Bay. In addition, Mobil Oil Corporation excavated approximately 4,000 tons

of contaminated soils to a depth of approximately 6 feet and utilized a soil burner to thermally treat the contaminated soils on-site. The treated soils were replaced back on the Mobil Oil site.

At the conclusion of the site remediation activities in November of 1992, the NYSDEC closed the file and placed this site on the "Inactive Spills" list. Although two wells on-site still contained very low levels of contamination, further remediation was not deemed feasible or necessary by the NYSDEC. The groundwater monitoring wells have been abandoned. The NYSDEC no longer conducts any monitoring of this site and has not placed any deed restrictions on the property (NYSDEC File Search, March 1, 1995; Gomez, March 6, 1995).

(e) Point and Nonpoint Pollution Sources

Point Sources

The term *point source*, as defined by the federal Clean Water Act, means "any discernable, confined and discrete conveyances, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." Point sources also include effluent discharges from sewage treatment plants and industrial waste treatment facilities.

Although diffuse runoff is generally treated as nonpoint source pollution, runoff that enters and is discharged from any conveyance described above (i.e., stormwater outfall pipes) is treated as a point source. Stormwater outfalls are a significant source of pollution affecting surface water quality of Sag Harbor Village waters.

Most point sources are subject to permit requirements of the Clean Water Act. In New York, the NYSDEC administers Clean Water Act permits under the State Pollution Discharge Elimination System (SPDES) permit system.

The principle point sources occurring in the Village of Sag Harbor include the sewage treatment plant, stormwater outfalls, and vessels and marinas. These are described below:

1. Sewage Treatment Plant

The Sag Harbor Village Sewage Treatment Plant (STP) is located on Bay Street. It is situated at the water's edge and discharges treated wastewater directly into Sag Harbor via a single ten-inch diameter, cast-iron outfall pipe which extends through the bulkhead seawall. Discharge goes to a sheltered cove located near the entrance of Sag Harbor. The STP outfall pipe may be above or below sea level, depending on the stage of the tide.

The service area for the Village STP covers approximately 50 acres of the more intensively developed VB Village Business District, and includes a large portion of the WF Waterfront District (see Figures 3 and 5). The entire sewage flow to the plant is either from domestic or commercial sources. A laundromat is the major generator. There are no industrial waste contributors. The Village is committed to providing service in this area and the more intensive land uses located, and to be located, therein. At present, no further extensions are envisioned.

The Sag Harbor STP performs secondary treatment on sewage and "extended aeration" on the effluent up to the point of discharge. The plant monitoring and reporting requirements are set forth in the State Pollution Discharge and Elimination System (SPDES) permit issued by the NYSDEC for the STP. Under the present conditions of the permit, the plant operator is required to continuously monitor the flow rate and record the ph level, settle able solids, dissolved oxygen (DO), residual chlorine and temperature of the effluent on a daily basis. Monthly monitoring of BOD5 (5-day biochemical oxygen demand), suspended solids, fecal coliform and total coliform must also be recorded. The current permitted design capacity of the Sag Harbor STP is 0.15 million gallons per day (MGD), and according to the plant operator, the facility has not experienced any recent problems meeting the actual flow rates or effluent constituent requirements set by the SPDES permit. Discharge Monitoring Reports (DMRs) which summarize the influent and effluent quantities and constituent concentrations, are sent monthly to the NYSDEC headquarters in Albany, the Region I NYSDEC office in Stony Brook, and the SCDHS in Farmingville, New York. The present SPDES permit expires on April 1, 1999 and is expected to be renewed with no additional conditions (Banarge, February 17, 1995; Ryder, March 3, 1995).

Initial construction of the Village sewage system took place between 1976 and 1977, and the STP was placed into service in December of 1977. Treatment of sewage influent is accomplished through a forced air system designed to deliver the necessary volume of oxygen required for aerobic bacteria to break down potentially harmful pathogens through blowers and diffusers in the aeration tanks.

Modifications to the plant's original capacity of 100,000 gallons per day have been made several times since it became operational in 1977. Between 1984 and 1985, a 50,000-gallon aeration tank was added to complement the facility's two existing 50,000-gallon aeration tanks, thus increasing the operating capacity of the STP to 150,000 gallons per day. During the same time, a 12,000-gallon settling tank was built. These modifications were necessitated by the construction of two condominium complexes that were brought into the district in that year.

After the 1984-85 modifications were completed, the STP's capacity was adequate to handle the normal demands of the district, including a 20,000-gallon per day allocation for the potential renovation of the Bulova Watchcase Factory building. This site has been proposed for redevelopment as a residential condominium complex. However, at several peak times

during the summer tourist season, the STP was unable to meet the sudden increase in demand and a moratorium was enacted prohibiting any additional hookups. A private consultant was contracted by the Village to perform a capacity analysis on the STP. Based on the findings of this analysis, the addition of a 25,000-gallon equalization tank and a 16,000-gallon aerated sludge holding tank were recommended and designed to augment the capacity of the STP during peak periods. These modifications were completed in September of 1994, just before the moratorium expired, and are utilized to ensure that the system will be available and functional to meet the demand during peak periods of use (Wagner & Ryder, February 16, 1995).

Federal and State water quality standards have required all publicly-owned treatments works (POTW) discharging into navigable waters of the United States, or its possessions, to be provided with "best practicable waste treatment technology," which has come to mean secondary treatment. As discussed above, Sag Harbor's sewage treatment plant provides secondary treatment with extended aeration to improve the treatment process. This means that effluent is aerated before it goes into the harbor. The plant runs at about a 95 percent removal rate for BOD, suspended solids, and total and fecal coliforms.

Outside the Village sewerage district, property owners are required to provide on-site sewage disposal systems (OSDSs) for developed parcels. These systems are subject to regulation under the Suffolk County Sanitary Code standards and procedures as administered by the Suffolk County Department of Health Services.

Boat pump-out facilities are located at the Sag Harbor Yacht Club and Marine Park. A mobile pump-out is also available for use. In addition, there are two Town of Southampton pump-out vessels.

Pollutant loadings from the sewage treatment plant include oxygen-demanding substances, viruses, bacteria, nutrients, suspended oils, heavy metals and organic chemicals.

2. *Stormwater Outfalls*

Stormwater outfalls are another significant point source of pollution affecting surface water quality in the Village. Stormwater discharges from upland areas in the Village can contribute pathogens, sediment loads, nutrients, road salts, metals, hydrocarbons and organic materials into adjacent surface waters. While not subject to federal or State permit requirements, stormwater outfalls are considered point sources. Federal and state stormwater regulations apply to municipal discharges of stormwater in cities with a population greater than 100,000. Areas with populations under 100,000, including the Village of Sag Harbor, will be subject to regulation in the next few years. Storm drains located in the Village are shown on Figure 5.

This category of point source pollution also includes the localized impact resulting from runoff that is directed to surface waters via culverts, streams or tidal inlets. A culvert located under John Street directs runoff to the tidal creek and salt marsh that connects to Upper Sag Harbor Cove. A culvert that passes under Jermain Avenue carries runoff into Otter Pond and its associated fringing wetlands. Another culvert is located at Bay Street and Rysam Street which directs stormwater runoff directly into the Marine Park boat basin, and ultimately Sag Harbor. Culverts are also located at Haven's Beach and under Redwood Road and Main Street. Tidal inlets are located at Little Northwest Creek, Haven's Beach, Otter Pond, and Ligonee Brook. These are shown on Figure 5.

3. *Vessels and Marinas*

Vessels contribute to nonpoint source pollution and affect surface waters within the Village. Federal regulations for vessels are generally standards for Marine Sanitation Devices (MSD's). Counts have been taken that have shown more than 800 boats entering Sag Harbor and Sag Harbor Cove on a daily basis. There is capacity for approximately 815 vessels (docks, slips and moorings) in those water bodies. Recreational boating as a nonpoint source of pollution to surface waters is discussed below.

Marinas are considered another source of pollution within the Village of Sag Harbor, and are subject to federal and State stormwater regulations under permits for industrial activities. The primary source is the general intensity of harbor use accompanied by debris, greases, and cleaners. Marinas can contribute significantly to the concentration of pollutants in the water column, bottom sediments, and tissues of benthic organisms living within the limits of the marina. The presence of a marina, however, is not necessarily an indicator of poor water quality. In fact, many marinas have good water quality. Despite this, they may still have an impact on the natural resources found at the site.

The following marinas are located in the Village of Sag Harbor (see Figure 4):

Ship Ashore Marina, Redwood Road	Outer Sag Harbor Cove
Sag Harbor Cove West Marina, West Water Street	Outer Sag Harbor Cove
Village **A** and **B** Docks, West Water Street	Outer Sag Harbor Cove
Sag Harbor Cove East Marina, West Water Street	Outer Sag Harbor Cove
Village Marina/Long Wharf, Bay Street	Sag Harbor
Waterfront Marina, Bay Street	Sag Harbor
Village Marina Park and Boat Basin, Bay Street	Sag Harbor
Sag Harbor Yacht Club, Bay Street	Sag Harbor
Sag Harbor Yacht Yard, Bay Street	Sag Harbor

Nonpoint Sources

Nonpoint source pollution is the pollution of waters caused by runoff as it moves, picks up and carries away natural pollutants and pollutants resulting from human activities and development, and finally depositing them into lakes, rivers, streams, wetlands, coastal waters and groundwater. By contrast to point sources, nonpoint sources include stormwater sheet flow runoff (i.e., unchannelized flow from paved surfaces, buildings and construction sites), and infiltrated groundwater flows from cesspools and septic tanks. Fertilizers and pesticides also contribute nitrogen and organic compounds to ground and surface waters. Technically, the term "nonpoint source" is defined to mean "any source of water pollution that does not meet the legal definition of *point source* under the Clean Water Act. In contrast to point sources, nonpoint sources are not subject to federal and State permit requirements.

Many categories and subcategories of nonpoint sources affect coastal waters. The U.S. Environmental Protection Agency, pursuant to 1991 amendments to the Coastal Zone Management Act, has developed guidance to focus on five major categories of nonpoint sources that impair or threaten coastal waters nationally: (1) agricultural runoff; (2) urban runoff (including developed and developing areas); (3) silviculture (forestry) runoff; (4) marinas and recreational boating; and (5) hydromodification and wetlands (channelization and channel modification, dams and stream bank and shoreline erosion, wetlands and riparian areas). Full description of EPA guidance for coastal nonpoint sources can be found in EPA's publication entitled Guidance Specifying Management Measures for Sources of Non-Point Pollution in Coastal Waters (U.S. EPA January 1993).

Nonpoint sources of pollution affecting coastal waters and tributaries within the Village fall within the following three EPA categories: urban runoff; marinas and recreational boating; and, hydromodification and wetlands. Overlapping areas between point sources and nonpoint sources occur with respect to urban runoff, marinas and recreational boating. While stormwater discharges and marinas are subject to point source regulation under the State and federal stormwater regulations, the factors contributing to the sources are largely nonpoint in nature. For example, while a stormwater outfall into Sag Harbor is a discernable and direct point source, the contributing areas and sources are extremely diffuse and are considered to be nonpoint.

Accordingly, water pollution from urban runoff, marinas and recreational boating activities needs to be addressed in both the point and nonpoint source management programs.

1. Urban Runoff

Urban runoff is generally the single most significant nonpoint source of pollution, especially bacterial pollution, affecting the fresh surface waters and the near shore marine environment. The elevated coliform counts associated with urban runoff have led to a ban on the harvesting of shellfish in approximately one-fourth of the most productive portions of all Long Island bays.

The following list describes the principal types of pollutants found in urban runoff, and their potential adverse effects.

- *Sediment* -- Suspended sediments generally constitute the largest mass of pollutants delivered to surface waters. Sediment has both short and long-term impacts on surface waters including increased turbidity, reduced light penetration, decreased abundance of submerged aquatic vegetation, impairment of recreational fishing resources, shoaling of waterways and navigation channels, and degradation of aesthetic quality.

- *Nutrients* -- Excessive nutrient loadings can result in eutrophication and depressed dissolved oxygen, which can adversely affect a variety of aquatic organisms.

- *Oxygen demanding substances* -- Decomposition of organic matter (e.g., leaves in stormwater runoff) by microorganisms can severely depress dissolved oxygen levels.

- *Pathogens* -- Urban runoff typically contains elevated levels of pathogenic organisms. The presence of pathogens may result in water body impairments such as shellfish bed closures, closed beaches, and contaminated drinking water (in freshwater bodies).

- *Road Salts* -- Snow runoff produces high salt and chlorine concentrations at the bottom of ponds, streams and other freshwater bodies. Not only can this condition prove directly toxic to benthic organisms, but it also reduces crucial vertical mixing necessary for dissolved oxygen replenishment and pollutant dispersal.

- *Hydrocarbons* -- Petroleum hydrocarbons are derived from oil products. The source of most such pollutants found in urban runoff is vehicles, such as engine drippings, and the disposal of used oil in storm drains. High concentrations of hydrocarbons are toxic to aquatic organisms and can accumulate in bottom sediments.

- *Heavy metals* -- Heavy metals such as copper, lead, and zinc are generally the most prevalent nonpoint chemical pollutants found in urban runoff. High metal concentrations

may bio accumulate in fish and shellfish and impact beneficial uses of affected water bodies.

The sources of urban nonpoint pollution affecting surface waters in the Village's local waterfront revitalization program area include the following:

- *Runoff from developed areas* -- Sag Harbor is a largely developed community, with few opportunities for additional development. Approximately 95 percent of the Village is developed. Developed areas can contribute fertilizers and pesticides from lawn management activities as well as fecal matter from pet wastes, among other pollutants.

- *Runoff from construction sites* -- Sediment derived from the erosion of soils that are stripped of vegetation during construction activities can be carried to surface waters. On a per unit area basis, construction sites are by far the greatest source of sediment delivered to receiving waters.

- *On-site disposal systems* -- Surface water quality impacts are caused by failed or inadequately maintained on-site septic systems, and by systems that are improperly sited (e.g., in areas of shallow groundwater, or too close to surface water bodies). Currently, only a limited portion of the LWRP area is serviced by sanitary sewers and the Village STP including a small portion of Bay Street, Long Island Avenue and West Water Street, discussed further in Section 2.3C(b).

- *Roads, highways and bridges* -- Stormwater runoff collected from these hardened surfaces discharges into coastal waters and tributaries. The following road endings (or unnamed extensions from another street) located in the Village contribute direct runoff into the surface waters of Otter Pond, Upper Sag Harbor Cove, Little Northwest Creek, and Sag Harbor Cove: White Street, John Street (unnamed extension), Wilson Place, Harding Terrace, Cove Road - North, Dartmouth Road - North, Amherst Road, Notre Dame Road, Yale Road - South (see Figure 5). Although these road ends may impart localized impacts to surface water quality, these same structures serve to benefit the residents of Sag Harbor as public access areas. Stormwater, in the form of sheet runoff, also flows directly into Outer Sag Harbor Cove from West Water Street, in the vicinity of Sag Harbor Cove West Marina and the Village Docks. Additionally, the Long Wharf and the North Haven/State Route 114 Bridge contribute roadway runoff directly to the surface waters of the local waterfront revitalization area.

  Heavy rains often result in flooding in the area of Rysam, Burke and Bay Streets. Stormwater is currently being handled through a drain on Rysam Street, where it then flows through a pipe under Bay Street and into the bay. Stormwater also enters a curb drain on Bay Street and then runs through the (same) pipe beneath Bay Street. The existing system is often inadequate in handling larger volumes of water and lacks

primary siltation devices which could trap/filter pollutants before the water empties into the bay.

- *Miscellaneous sources* -- Contaminants are introduced into surface waters via various activities in households, commercial facilities, and landscaping services, including, but not limited to: improper storage, use and disposal of hazardous chemicals; littering; excessive application of fertilizers, herbicides and pesticides; improper disposal of leaves and yard trimmings; and pet excrement.

2. Marinas and Recreational Boating

As discussed above, pollutants from marinas and recreational boating may enter the water through discharges from boats, spills, maintenance areas, stormwater runoff and vessel operation. The types of pollutants and associated impacts from marinas and recreational boating include the following:

- *Organic materials* -- The organic materials discharged from recreational boats require dissolved oxygen to decompose. The accumulation of these substances in sediments will result in a sediment oxygen demand that can reduce the level of dissolved oxygen in the overlying water column.

- *Toxics* -- Activities associated with boatyards and marinas often contribute heavy metals to the water column and bottom sediments. Metal-laden compounds are widely used in boat maintenance and repair operations. Lead is used in fuel additives; ballast and bilge discharges cause its release. Arsenic is used in paint pigments. Copper and tin are used in antifoulant paints. Other metals (i.e., iron and chromium) are used in the construction of marinas and boats. Heavy metals adhere to fine-grained sediment particles. Contaminated sediments become resuspended into the water column during dredging operations.

- *Petroleum hydrocarbons* -- Concentrations of hydrocarbons in marina waters are often attributed to untidy refueling activities and bilge or fuel discharges from boats. Many hydrocarbon compounds are toxic to aquatic organisms and can accumulate in bottom sediments.

- *Pathogens* -- Boats can be a significant source of fecal coliform bacteria in areas with high vessel density and poor tidal flushing. Fecal coliform levels in marinas and mooring areas can become elevated during periods of high boat occupancy and usage. Consequently, areas that have high concentrations of vessels are often closed to shellfish harvesting during the summer boating season as a precautionary measure.

- *Disruption of sediment and habitat* -- Boat operation and dredging can destroy marine habitat, resuspend bottom sediments and nutrients, increase turbidity, and reduce the

oxygen content of the water. In addition, boat wakes can destroy wetlands, increase shoreline erosion, and impact biological communities and habitats.

As discussed above, vessels docked, moored, anchored or otherwise operating on the waters of Sag Harbor are potential contributors of pollution and can adversely affect water quality, fish and wildlife habitats, and human health. During peak periods of the boating season, more than 800 vessels have been recorded entering Sag Harbor and Sag Harbor Cove daily, and accommodations for approximately 750 vessels are available for overnight stays throughout the harbor.

The current methods for measuring coliform levels in surface waters are geared toward detecting the presence of bacteria derived from relatively homogeneous and steady contamination sources, such as stormwater runoff. These methods are not adequate to detect the presence of unsafe coliform levels derived from intermittent and concentrated sources, particularly vessel waste discharges. Consequently, the U.S. Food and Drug Administration's (FDA) present shellfish sanitation protocol does not include the direct measurement of coliform levels in areas of concentrated boating activity (e.g., anchorages, mooring areas, and marinas). Instead, the FDA requires that the State shellfish control agency (i.e., NYSDEC) perform a dilution analysis which considers the following factors and assumptions:

(a) the number of boats in a mooring or anchorage area;
(b) the percentage of these boats that will discharge untreated wastes to surrounding waters;
(c) an assumed occupancy rate of two persons per boat;
(d) an assumed discharge rate of $2x10^9$ fecal coliforms per person per day;
(e) an assumption that wastes are completely mixed within the water available in and around the mooring or anchorage area; and
(f) under the specifications of this FDA guideline, closure of a shellfish bed that is used for boat mooring/anchoring would be required if the theoretical calculated fecal coliform concentration exceeds 14 MPN/100 ml (where MPN/100 ml is the most probable number of organisms per 100 milliliters of sample).

It is important to note that this methodology is not designed to compute actual coliform concentrations but, rather, is intended to assess the maximum potential level of contamination that could be contributed by the boats in a given area. Thus, in general, the degree of actual water quality deterioration will not be as severe as is indicated by the coliform level calculated by means of the dilution analysis. Furthermore, in cases where the dilution analysis indicates a marginal exceedance of the 14 MPN/100 ml criterion (which would compel the NYSDEC to close the area to shellfish harvesting), the actual coliform level may be in conformance with this criterion.

The NYSDEC has identified two specific areas in the harbor complex that are of concern with regard to the potential contamination of shellfish beds due to seasonal water quality degradation and/or vessel waste discharges: the easterly portion of Outer Sag Harbor Cove, and the waters in the Redwood boat basin. Both of these areas are used on a seasonal basis for high density, overnight anchoring, especially during summer holiday weekends. The NYSDEC has indicated that concentrated sewage discharges from vessels in these areas have the potential for the localized contamination of the underlying shellfish beds. The NYSDEC believes that the potential exists for tainted shellfish to reach market if these areas are harvested during or immediately after a busy period of vessel activity during which boats discharge untreated wastewater into the bay.

The Village of Sag Harbor may wish to pursue a vessel waste *no-discharge zone* designation within the Sag Harbor Cove Complex, west of the breakwater, and will coordinate with the NYSDEC and Towns of East Hampton and Southampton. The advantage of this designation would be to prohibit the discharge of vessel sewage within the bounds of the harbor zone and give jurisdiction to local officials for the enforcement of laws governing discharges and vessel inspections. Although federal law prohibits the discharge of untreated sewage within three miles of shore, treated sewage may be discharged inside this boundary and the United States Coast Guard has the sole responsibility for enforcement. Lloyd Harbor and Huntington Harbor are State-designated vessel waste *no-discharge zones*. The Environmental Protection Agency (EPA) determined, based on the State and Town petition, that there are sufficient facilities to support designation as *no-discharge zones*. Pursuant to the State Navigation Law, once EPA makes that determination based upon the State's petition, the water-body is automatically, by State Statute, a State-designated no-discharge zone. The Village would enact a local law, should it be designated.

The Village presently maintains two pump-out facilities (one stationary and one mobile) which are available free of charge to any vessel operator. The Harbormaster must be contacted for use of the mobile facility. The maximum wait to use the pump-out is approximately 30 minutes; however, an appointment can be set up in advance to use the facility. The stationary pump-out is located on the bulkhead at the Marine Park facility. Use of this device requires that the vessel be docked in the adjacent slip in order to gain access. Collection at this location is constrained due to the hose length and by the availability of dockage. The Village's mobile pump-out device is located on a truck, therefore, it has a broader scope of usage. This device is utilized at all Village facilities and at the private marinas throughout the *Waterfront Functional Area*. The Town of Southampton has purchased five 22-foot, 300-gallon capacity, pump-out boats. These boats will pump out any boat located in Town waters that hails them on the designated marine radio channel (i.e., channel 73). One of those Town pump-out boats docks at the Village A Dock. Vessel waste collection has increased since this unit has become available in Village waters. Hose length is no longer a constraining factor in waste collection.

All of the vessel sewage collected by the two Village pump-out facilities are presently stored in an underground tank. These wastes are now removed by a licensed private carter and trucked to the Suffolk County Scavenger Waste Facility at Bergen Point, in the Town of Babylon, for treatment and disposal.

3. Hydromodification and Wetlands

Hydromodification activities affect streams and water bodies. They can result in the loss of wetlands and riparian areas adjacent to waterways and may also exacerbate nonpoint source pollution problems. The following are the major categories of effects and examples of associated problems:

- *Changed sediment supply* -- One of the most significant changes in water bodies associated with hydromodification and loss of wetlands and riparian areas is increased sedimentation. Stream side development, loss of wetland and natural areas adjacent to water bodies, and increased stream bank erosion due to augmented by stream flows will increase sediment loads delivered to coastal waters. These changes in sediment supply can cause problems such as increased shoaling of near shore areas and channels, impacts on benthic organisms, increased water column turbidity, and further loss of wetlands.

- *Accelerated delivery of pollutants* -- Alterations to streams, increased runoff and loss of riparian buffers leads to increased pollutant loads and an accelerated rate of delivery of pollutants to downstream sites.

- *Changes to ecosystems* -- Hydromodification and loss of riparian areas can lead to the loss of in stream and wetland habitats, and the loss of ecosystem benefits such as wildlife corridors, migration routes and suitable areas for reproduction and growth.

- *Loss of natural pollution filters* -- Wetlands and riparian areas provide various benefits, including water quality improvement, aquatic habitat, stream shading, flood attenuation, shoreline stabilization, and groundwater exchange. Loss of wetlands and riparian systems allows for a more direct contribution of nonpoint pollution sources to receiving waters, decreased interception and filtering of surface runoff, and the loss of natural processing and filtering of nutrients and other pollutants.

In the Village of Sag Harbor, the following conditions related to hydromodification have been noted:

- the low-lying area in the vicinity of Spring Street and to the west of Long Island Avenue was occupied by a tidal wetland at one time, but is now developed and prone to flooding;

- Otter Pond has had most of its protective fringe removed. The area to the east of the pond still provides filtration and stabilization for the pond;

- the wetland fringe along Sag Harbor Bay is mostly gone; and

- the addition of dredge spoil fill at Haven's Beach and vicinity has resulted in the loss of wetlands.

C. INFRASTRUCTURE

(a) Public Water Supply

All of the public water supply for the Village is drawn from the upper glacial aquifer. The Suffolk County Water Authority (SCWA) supplies the entire Village with potable water supplies. Water is currently drawn from three wells at the SCWA well field located on Division Street, opposite Middle Line Highway. According to SCWA engineers, one older well was recently retired due to turbidity problems. Due to this fact, the SCWA can only marginally meet demands during peak use periods in the summer. However, water restrictions are not required to meet the demand. A new well field was constructed further inland, off Sag Harbor Turnpike. This new well field supplies the Division Street well field, and was put in service during the summer of 1996.

Groundwater and water quality are discussed further in Section 2.3B(d).

(b) Sewage Disposal

Sanitary wastes generated in the Village of Sag Harbor are disposed of in one of two ways: at the Village of Sag Harbor Sewage Treatment Plant, or through on-site sewage disposal systems. The Village Sewage Treatment Plant (STP) is located on Bay Street in the Village of Sag Harbor. The plant is situated at the water's edge and discharges secondary-treated wastewater directly into Sag Harbor via a single outfall pipe which extends through the bulkhead seawall. Discharge goes into Sag Harbor, which is sheltered by the breakwater.

The service area for the Village STP covers approximately 50 acres of the more intensively developed VB - Village Business District, and includes a large portion of the WF - Waterfront District (see Figures 3 and 5). The entire sewage flow to the plant is either from domestic or commercial sources. A laundromat is the major generator. There are no industrial waste contributors. The Village is committed to providing service in this limited area and the more intensive land uses located, and to be located, therein. At present, no further extensions in this area are envisioned.

Outside the Village sewerage district, property owners are required to provide on-site sewage disposal systems (OSDSs) for developed parcels. These systems are subject to regulation under the Suffolk County Sanitary Code standards and procedures as administered by the Suffolk County Department of Health Services. Sewage treatment and disposal is discussed in greater detail in Section 2.3B(e).

(c) Traffic Circulation, Parking and Mass Transportation Services

The Village of Sag Harbor, like many small seaport communities that were established before the automobile, suffers from a roadway system that was not designed for the efficient combination of through traffic, local traffic, and safe pedestrian traffic. The center of Sag Harbor's street system is "Long Wharf," with principal roadways radiating outward. The Village's early founding is also evident in the narrow local streets in the vicinity of the business center.

There are two major routes into the Village of Sag Harbor. Both roadways are minor arterial highways. Bridgehampton - Sag Harbor Turnpike (Suffolk County Route 79), known as Main Street within the Village, runs north from Montauk Highway (NYS Route 27) in Bridgehampton, to the south end of Long Wharf, where it terminates. East Hampton-Sag Harbor Turnpike (NYS Route 114), also known as Hampton Street in the Village, runs in a northwesterly direction from Montauk Highway in East Hampton to intersect with Main Street. NYS Route 114 continues north along Main Street for a short distance, crossing over the North Haven bridge through the Village of North Haven to Shelter Island. A secondary route into the Village is Noyack Road (Suffolk County Road 38), which is considered a major collector roadway. CR 38 originates at Montauk Highway in Southampton, where it is known as North Sea Road, and generally runs in a northeasterly direction to Sag Harbor, where it intersects Brickiln Road. Sag Road/Madison Street and Division Street are collector roadways that run north to Sag Harbor Village from Montauk Highway in the eastern portion of the Town of Southampton. The remainder of the streets in the Village are best described as local streets providing access to abutting properties and accommodating local traffic circulation.

As Sag Harbor has become a more popular place for living and for recreation, vehicular traffic has been on the increase. This problem is further complicated by the fact that traffic uses Noyack Road and NYS Route 114 as a bypass for heavy traffic congestion along Montauk Highway during the summer season. Year-round and summer residents in the Village, as well as tourists, other than those arriving by ferry, are vehicle-dependent. The Village center is small and only a limited amount of land area is available for parking. In addition, because of the historic layout of the streets, many are narrow and unsuited for heavy traffic volumes or parking. Heavy traffic also impacts architectural elements of historic structures (e.g., foundations of structures loosen). Since development in Sag Harbor Village occurred before the automobile, the storage of these vehicles was not provided for in the business center. Some diagonal on-street parking exists along Main Street, with a two-hour limit. Additional municipal parking on Long Wharf is limited to three hours. However, there is a greater demand during peak periods than these areas can provide for. As a result, the Village has provided additional off-street parking areas in recent years. There are currently, approximately, 480 off-street parking spaces in the Village of Sag Harbor.

The 1986- LWRP contained a number of recommendations for the improvement of parking and pedestrian circulation. The additional parking lots provided by the Village were in

response to the need expressed in the LWRP. Other recommendations that were acknowledged include the installation of a continuous sidewalk on the north side of Bay Street, connecting Marine Park with the Long Wharf and Main Street. The recommended improvements for the sidewalk on the south side of Bay Street, or for the sidewalk between Division Street and Main Street, were not implemented. As a part of the construction of a parking lot for the Post Office, a pedestrian walkway was installed that extended from Long Island Avenue, in the vicinity of the Post Office, to Meadow Street to provide access to the off-street parking lot located in this area. Recommended sidewalk improvements along other portions of Long Island Avenue in the vicinity of the waterfront, were not undertaken.

A Parking and Circulation Study, prepared for the Village of Sag Harbor in March of 1993, included a variety of recommendations for alleviating some of the traffic problems occurring in the Village. These included improved signage indicating the location of municipal off-street parking to drivers unfamiliar with the area, flow control via strategically located one-way streets, and revised zoning regulations. Additionally, in 1999, the New York State Department of Transportation (NYSDOT) will replace the North Haven/Route 114 Bridge. The bridge carries NYS Route 114 over Sag Harbor Cove. The bridge is not considered historically significant, but is located next to the Sag Harbor Historic District. Different design alternatives are under consideration. Some involve the rehabilitation of the existing structure, while others involve the construction of an entirely new facility. Provisions to be included in any design include two-way bike lanes, extensive landscaping, pedestrian sidewalks with handicapped access ramps, and a positive stormwater drainage system. The NYSDOT representatives have stated that an extension of the bridge reconstruction project, to mitigate the congestion problems at the Main Street/Route 114/Long Wharf intersection, or to institute other traffic or pedestrian circulation improvements in this area, would be considered if the Village submitted a proposal. A *bridge committee* has been formed by the Village, in conjunction with the Village of North Haven, to discuss design elements of the bridge.

Within the small area that encompasses the VB - Village Business and WF - Waterfront Zoning Districts, planning efforts should emphasize careful integration of motorist and pedestrian needs for safety, convenience and comfort, yet strive to enable traffic to move through this area with as little difficulty as possible in an attempt to relieve congestion problems, especially during the peak summer tourist season. Traffic congestion, which in the past had been a problem only during the summer season, is now a problem year-round. Specific areas requiring attention include a deficiency of both on- and off-street parking; vehicular backups caused by both high volumes of vehicles entering the Village, and vehicles using the Village as an alternate route to points further east; and traffic delays caused by vehicle using the often over-taxed Main Street/Route 114/Long Wharf intersection. Resident complaints include increased air and noise pollution; building damage caused by vibrations from heavy vehicles, and safety concerns for pedestrians, bicyclists, and children.

In 1995, at the request of the Village Harbor Committee, a report was prepared by a local resident (M. Grosjean, February 1995) which examines traffic problems in Sag Harbor

Village. This report was based on subjective information gathered from local residents and citizen groups and other sources to document certain problems and conditions in the Village, and to provide solutions to these problems. The report recommends, among other things, the implementation of "traffic calming" techniques at three intersections and along three major roadways in the Village to slow traffic flow, reduce congestion, and improve pedestrian circulation. These techniques include: the installation of landscaped islands, planted medians, bicycle lanes, and raised crosswalks; the narrowing of traffic lanes to provide more on-street parking and slow traffic; and, extending sidewalks at intersections.

The Grosjean report offers insight into certain concerns that should be examined by the Village, and the perspective provided by the local residents involved in its preparation deserves consideration (the report is available for review from the Village Harbor Committee). However, since this report is not a technical study, the recommendations it contains should not be implemented without further investigation as to how these traffic calming methods and other recommended mitigation measures would impact the overall flow of traffic in the Village. A professional analysis of how such techniques could be utilized and what impacts may result from their implementation is required.

Public Transportation

Public Transportation within the Village of Sag Harbor is accommodated by two bus routes, run by Suffolk County Transit. One, Suffolk Transit Route S-92, runs from East Hampton to Orient Point via Riverhead. It reaches north to Sag Harbor on the Bridgehampton - Sag Harbor Turnpike, CR 79. There are nine trips daily each way, westbound and eastbound. The second bus route, 10A, runs from South Ferry in North Haven through North Sea to Southampton Village and terminates at Southampton College. At Sag Harbor there are five trips in each direction, six days a week (there is no service on Saturdays). Additionally, a private jitney service operates year-round providing daily round-trip bus service from Manhattan to Sag Harbor, with stops in Manorville, Westhampton, Quogue, East Quogue, Hampton Bays and Sag Harbor. Service includes connections to both New York City airports, as well as MacArthur Airport in Islip. The jitney stop is located in front of Village Hall on Main Street.

The Montauk Branch of the Long Island Railroad (LIRR) serves the Sag Harbor area with stations in nearby Southampton, Bridgehampton, and East Hampton. Direct connection to the Village of Sag Harbor via the above bus lines is available from the Southampton railroad station. Railroad service terminates at Pennsylvania Station in New York City to the west, and at the Montauk railroad station in the east.

During the summer months the New England Steamship Lines runs a passenger ferry from Haddam, Connecticut that docks at the northern end of the Long Wharf in Sag Harbor. Every day at approximately noon, the "Yankee Clipper" (with a capacity of 500 persons) docks at the wharf; passengers have three hours before their return home.